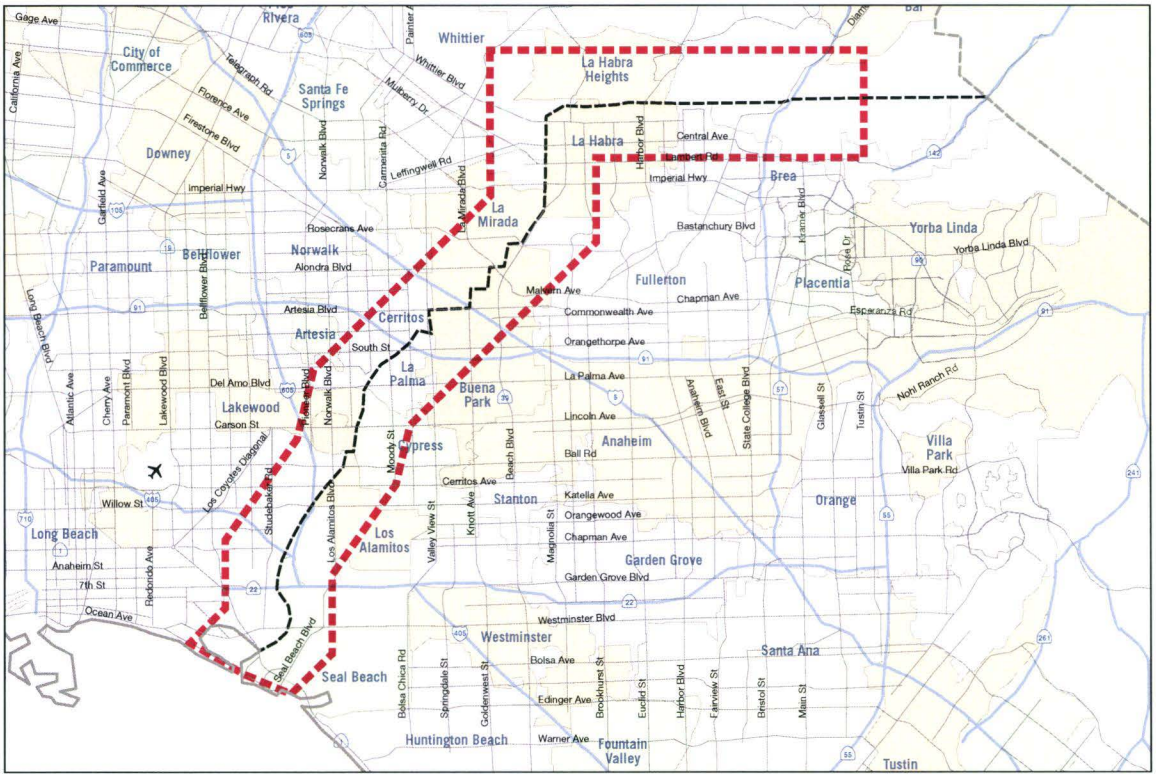
OCTA Metro

Orange and Los Angeles Intercounty Transportation Study

Conceptual Alternatives Report



July 16, 2008

IBI Group
with Fehr & Peers | Arellano Associates | Sarah Catz

IBI GROUP

ORANGE AND LOS ANGELES INTERCOUNTY TRANSPORTATION STUDY

Conceptual Alternatives Report

Task 4

July 16, 2008

IBI GROUP

in association with

Fehr & Peers, Arellano Associates, and Sarah Catz

CONCEPTUAL ALTERNATIVES REPORT

Document History

Version	Date	Revisions By	Status
1	June 13, 2007	C. Chen/B. Delo	Draft Submittal to OCTA/Metro
2	July 16, 2008	C. Chen/B. Delo	Submittal to OCTA/Metro
3			
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TABLE OF CONTENTS

LIST OF EXHIBITS

APPENDIX EXHIBITS

1 INTRODUCTION

The Orange and Los Angeles (OC/LA) Intercounty Transportation Study explored alternatives for improving transportation infrastructure and services across the border between Orange and Los Angeles counties. The study was jointly funded and managed by the Orange County Transportation Authority (OCTA) and the Los Angeles County Metropolitan Transportation Authority (Metro). This was the first time the two agencies have cooperatively conducted a transportation planning study, and the study has laid the groundwork for future studies.

The objectives of the OC/LA Intercounty Study were to identify transportation needs and issues within the study area and to develop conceptual transportation improvements and strategies to address these needs. The study included extensive coordination with the cities located along the border, both with technical staff and elected officials. Public involvement was also an important part of the study, to assist in the identification of transportation needs and the development of potential improvements.

1.1 STUDY AREA

The project study area is a diverse mixture of 17 municipalities that are traversed by six major freeways. The study area is also served by local and regional transit systems operated by OCTA, Metro, the Southern California Regional Rail Authority (Metrolink), and local cities.

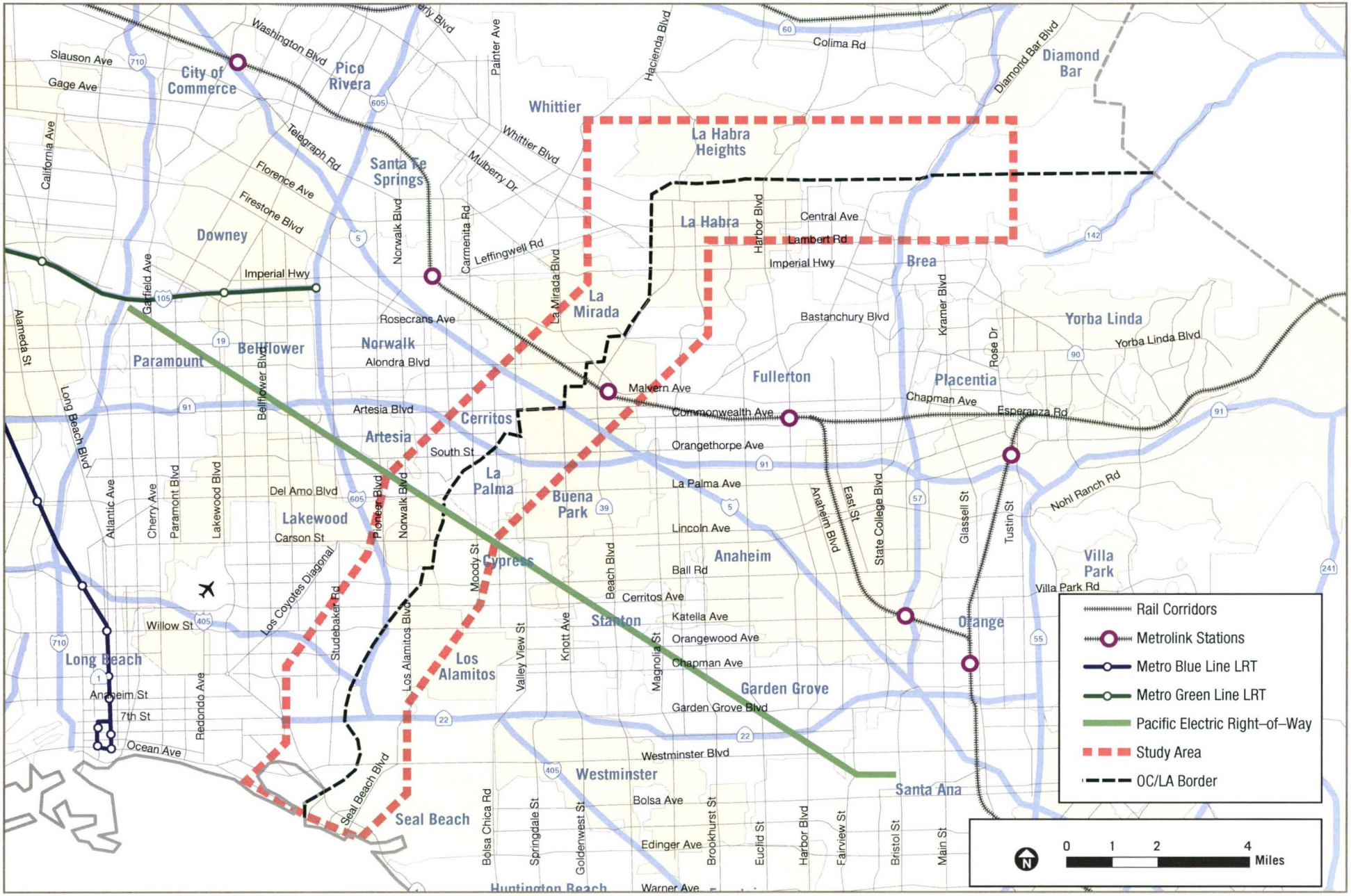
The study area for the OC/LA Intercounty Transportation Study follows the border between the two counties from the Pacific Ocean in the southwest to the Chino Hills in the northeast. The study area boundary extends approximately one mile in either direction beyond the border between the two counties. However, the travel demand data collected for the study extends beyond this boundary in order to provide a comprehensive understanding of travel patterns and trip origins and destinations near the county line. Exhibit 1-1 illustrates the study area, along with major transportation corridors serving the area.

1.2 STUDY OBJECTIVE

The Conceptual Alternatives Report presents a series of five concepts that include numerous projects and strategies that are intended to assist in serving the forecast increase in travel demand between Orange and Los Angeles counties. The OC/LA Intercounty Transportation Study is an idea generation study, with the objective of identifying a wide range of potential projects to address the identified purpose and need for transportation improvements across the OC/LA county line. Since this initial study is only in the scoping phase, the projects identified in this report have not been subjected to an evaluation and screening process. Instead, the projects outlined in this report will serve as a baseline for the development of formal alternatives to be evaluated in future phases of study.

OC/LA Intercounty Transportation Study

Exhibit 1-1 Study Area | July, 2008



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1.3 Public and Agency Input

The conceptual alternatives have been developed with input received from the study Technical Working Group (TWG), elected officials, and the general public. The TWG is comprised of technical staff from OCTA, Metro, Caltrans Districts 7 and 12, and cities located along the OC/LA county line. TWG meetings were conducted in January, February, and April of 2008 to review the conceptual alternatives and provide TWG members with opportunities to suggest additions and refinements to the alternatives.

An elected officials workshop was conducted on April 30, 2008 at the Los Alamitos Joint Forces Training Base in Los Alamitos. This workshop provided elected officials from the OCTA and Metro Boards of Directors and local cities the opportunity to review the draft conceptual alternatives and provide feedback on additional projects and strategies that could be considered for inclusion. The draft conceptual alternatives were also presented to the OCTA Highways Committee and Board of Directors, the Metro Planning and Programming Committee and Board of Directors, and the Gateway Cities Council of Governments (GCCOG) Transportation Subcommittee.

Two public open houses were conducted so that members of the public could review the conceptual alternatives and provide feedback on the proposed projects and strategies. One open house was conducted on May 13, 2008 in Los Angeles County in the City of La Mirada. The second open house was held on May 15, 2008 in Orange County in the City of Cypress. A more detailed summary of public and agency input is provided in Section 4.

2 SUMMARY OF CORRIDOR MOBILITY PROBLEM AND PURPOSE AND NEED REPORT

The Corridor Mobility Problem and Purpose and Need Report summarized existing and future transportation conditions in the study area and incorporated modeling data and local input into a document that describes the purpose and need for transportation improvements in the OC/LA study area. The transportation network in and near the study area was described, along with planned transportation improvements in the study area that provide the groundwork for analysis for future transportation needs. The report also summarized travel demand data and transportation system performance in the study area. The analysis and conclusions were used to develop the purpose and need statement. The purpose and need serves as the basis for conceptual alternatives described in this report.

2.1 POPULATION AND EMPLOYMENT DATA

Existing and forecast population and employment data for the project study area were obtained from OCTA and Metro. In the existing condition, there are about 410,000 residents living within one mile of the OC/LA county line. About 175,000 jobs are located within the study area. Steady growth in both population and employment levels within the OC/LA study area is anticipated in the time period between Year 2000 and study horizon Year of 2030. The highest population densities for the Year 2000 and Year 2030 are observed in the central portions of the study area in Buena Park, Cerritos, Lakewood and La Mirada. The central portion of the study area also has the highest concentrations of employment along the OC/LA county line. The greatest percentage of population and employment growth between Year 2000 and Year 2030 is anticipated to occur in the northern portions of the study area (Diamond Bar, Brea, La Habra) and in the areas near the coast (Long Beach, Los Alamitos). Exhibit 2-1 illustrates the forecasted population growth within the project study area between 2000 and 2030. Projected study area employment growth for the same 30-year time period is illustrated in Exhibit 2-1

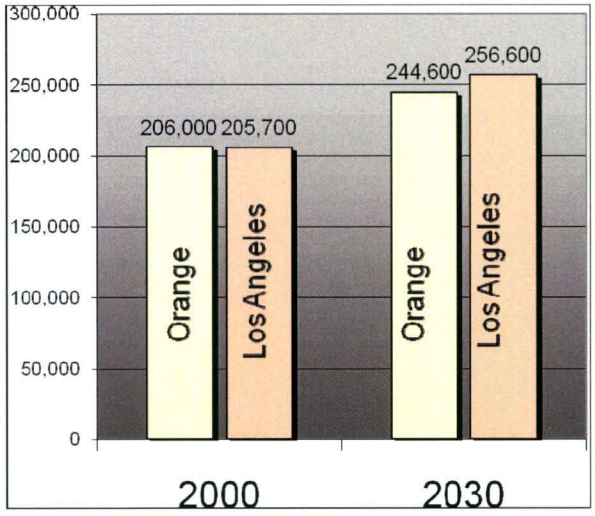


EXHIBIT 2-1
STUDY AREA POPULATION GROWTH
YEAR 2000 TO YEAR 2030

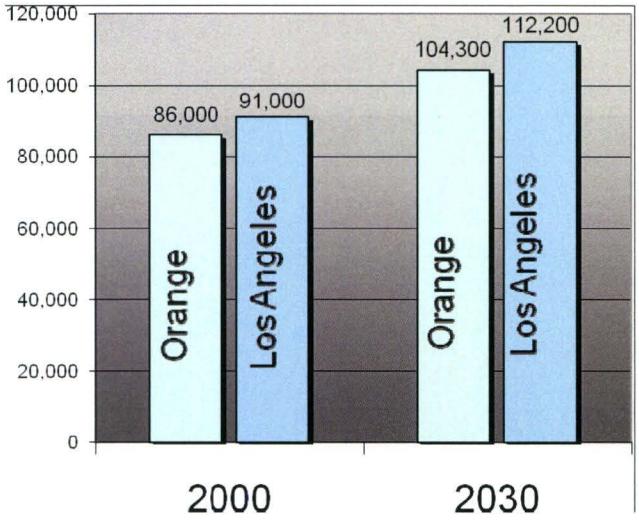


EXHIBIT 2-2
STUDY AREA EMPLOYMENT GROWTH
YEAR 2000 TO YEAR 2030

2.2 TRAVEL DEMAND DATA

Forecast year 2030 travel demand data for the study area was generated using the Orange County Transportation Analysis Model (OCTAM), version 3.2, the regional model for transportation planning in Orange County. Input was also received from Metro regarding the transportation network and travel forecasts in Los Angeles County. The travel demand data showed a strong attraction between Orange and Los Angeles counties in regard to trips across the county line. This pattern is particularly apparent in cities located along the OC/LA county line. In the Year 2030, about 9% of the nearly 11 million total daily vehicle trips generated in Orange County are forecast to travel to destinations in Los Angeles County. By comparison, about 3% of the over 33 million daily vehicle trips generated in Los Angeles County are destined for Orange County.

An estimated two million trips cross the OC/LA county line on a daily basis in the existing condition. Additionally, trips between the two counties are forecast to increase by 26% from the existing condition to the Year 2030. It is important to note that trips across the county line include not only the trips between Orange and Los Angeles counties, but trips with origins in San Bernardino County, Riverside County, San Diego County, or other locations in Southern California. These regional trip origins must also be considered when developing improvements to address transportation needs between Orange and Los Angeles counties.

Related to the anticipated increase in trips across the OC/LA county line, a large increase in vehicle miles traveled (VMT) and vehicle hours traveled (VHT) is also forecast. Weekday VMT in the project study area is estimated to increase by 25% between 2000 and 2030. By comparison, weekday VHT in the project study area is forecast to increase by 47% over the same time period. The forecast increases for VHT in the study area are significantly higher than the forecast increases in VMT. This means that commuters are forecast to experience higher levels of travel delay when compared to the existing condition.

2.3 System Performance/Mobility Problem

The performance of the existing and future transportation system within the project study area was analyzed to establish the purpose and need for transportation improvements across the OC/LA county line. The major findings of the system performance analysis included:

- In the year 2030, traffic is forecast to operate at a poor level of service on a majority of study area freeway segments and on several major arterial roadways including: Katella Avenue, Imperial Highway, Whittier Boulevard, and Brea Canyon Road.
- The highest freeway daily traffic volume increases between 2007 and 2030 are forecast to occur on the SR-57 and I-5 freeways.
- The highest arterial daily traffic volume increases between 2007 and 2030 are forecast to occur on Imperial Highway, Rosecrans Avenue, Katella Avenue, and 7th Street.
- Demand for transit services (local bus, regional bus, and Metrolink) are forecast to increase between 2007 and 2030.

Defining intercounty mobility problems is an essential part of establishing the purpose and need for transportation improvements near the county line. The following are the findings and conclusions regarding mobility problems between Orange and Los Angeles counties:

- Traffic congestion is substantial in the existing condition, particularly on study area freeways, and congestion levels are forecast continue to increase in the year 2030 Baseline condition.
- Vehicle hours traveled (VHT) and vehicle hours of delay (VHD) are forecast to increase at a faster rate than vehicle miles traveled (VMT) in the study area between the existing condition and Year 2030. Commuters and travelers in the study area will experience increased levels of congestion and delay as compared to the existing condition.
- A majority of the freeway segments in the OC/LA study area are forecast to operate at a poor level of service during the AM and PM peak periods in the Year 2030.
- Significant traffic congestion and poor levels of service are forecast on several arterial roadways in the Year 2030. This situation has the potential to severely constrain intercounty travel.
- Only a limited number of local and regional transit services provide connections across the OC/LA county line. Transit services that do cross the county line are not necessarily coordinated to connect with transit services operating in the neighboring county.
- Demand exists for regional transit services such as Metrolink commuter rail, bus rapid transit, and express bus services, but these services are limited in their operating hours and areas of service. This condition limits the regional transit options available to residents and commuters seeking to travel across the county line.
- Freight goods movement has an impact on traffic operations and rail capacity within the study area. Improvements to the transportation network should factor in the impacts associated with goods movement and address goods movement within the overall context of improving transportation between Orange and Los Angeles counties.

- The existing network of bikeways serving the study area is in need of better connections across the county line and more continuous corridors that link major activity centers. The presence of bikeway facilities varies on a city by city basis, creating gaps and reducing the ability of bicycle commuters to make longer regional trips. The Coyote Creek Bikeway is a good candidate for improvement to connect bikeways in the study area.

2.4 KEY ISSUES

The Purpose and Need Report identified six key issues that relate to intercounty transportation needs between Orange and Los Angeles counties. The six key issues serve as the basis for improving planning and coordination efforts and implementing enhancements and improvements to the transportation system near the county line. The projects proposed in the conceptual alternatives aim to address each of the six key issues through fundamental and innovative strategies.

Interagency Coordination: The OC/LA Intercounty Transportation Study is the first significant joint planning effort undertaken by OCTA and Metro that specifically looks at transportation issues along the OC/LA county line. This study is an important first step for OCTA and Metro to work together to improve transportation infrastructure and services between Orange and Los Angeles counties. Increased coordination between agencies is essential for the successful implementation of transportation improvements. There are also significant opportunities for cities located along the county line to use this study effort to increase coordination and cooperation on local transportation issues. Issues such as traffic signal synchronization, roadway improvements, and bicycle and pedestrian facilities are typically handled at the city level.

Freeway Congestion: Traffic congestion is already a substantial constraint on mobility for all freeways in the OC/LA study area. Forecasted increases in traffic volumes, delay, and travel demand for the Year 2030 condition will only further exacerbate the pressure on the freeway network serving Los Angeles and Orange counties. In 2030, the majority of freeway segments in the OC/LA study area are forecast to operate at poor levels of service (LOS E or F). A range of improvements for the freeway network needs to be explored to meet forecast travel demand. Improving the operating efficiency of the existing freeway infrastructure will be important in order to maximize traffic flow. However, operational improvements alone will not be able to serve forecasted Year 2030 traffic volumes. Additional freeway capacity is necessary to serve anticipated traffic volumes and to ensure the continued economic growth of Southern California.

Arterial Roadway Congestion: The Year 2030 traffic forecasts identify future traffic congestion on arterial roadways crossing the OC/LA county line. However, due to land use and geographic constraints, there is insufficient arterial roadway capacity available to meet travel demand in many portions of the study area. Limitations on arterial roadway capacity are forecast to cause substantial impacts to the mobility of residents and commuters across the county line. The capacity limitations also contribute to higher levels of forecasted delay and traffic congestion.

Optimization of Existing Transportation Infrastructure: There is local support for improving traffic operations in existing corridors through the implementation of intelligent transportation

measures. Cities located along the county line have expressed reservations about significant freeway and roadway widening that could have adverse impacts on their communities and adjacent land uses. Based on this input, improvements and capacity enhancements within existing public rights-of-way need to be explored during the development of conceptual alternatives.

Traffic signal coordination and improved transit services are two strategies which deserve additional consideration. The implementation of traffic signal coordination and synchronization across the county line should be explored to improve traffic flow on arterial roadways. Improving the frequency and volume of transit services within an existing freeway and arterial roadway network would increase the capacity of these facilities and optimize existing transportation corridors and infrastructure.

Transit Connectivity: Improvements to regional transit services between Orange and Los Angeles counties are necessary to meet existing and future travel demand. There are a limited number of transit services that cross the county line, and many of these services operate primarily or exclusively during peak hours and in peak directions only. This limits the potential to carry a significant amount of travelers across the county line. Additional regional transit services are needed to meet forecast demand for transit service, particularly in portions of the study area that are not well-served by the Metrolink commuter rail system.

Use of Pacific Electric Right of Way: The Pacific Electric right of way (PE ROW) provides OCTA and Metro an opportunity to implement a regional transit service to connect Orange and Los Angeles counties. A project in this corridor would also increase the capacity of the transportation network within an area that has a limited number of parallel or alternative routes. The travel demand data for the Year 2030 shows a significant number of trips between Orange and Los Angeles counties from the cities that border the PE ROW. These travel forecasts suggest a healthy potential market for transit services in the Year 2030 in and near the PE ROW corridor. Therefore, transportation improvements should be explored to serve this travel market.

3 CONCEPTUAL ALTERNATIVES

The conceptual alternatives have been developed to address the mobility problems, needs and issues with the transportation network linking Orange and Los Angeles counties. The projects and strategies outlined in the conceptual alternatives are intended to provide OCTA and Metro with a starting point for improvements that would undergo detailed analysis and evaluation as part of future studies.

The Year 2030 Baseline projects form the basis for the development of the conceptual alternatives. The projects included in the 2030 Baseline were identified in the Corridor Mobility Problem and Purpose and Need Report and are again summarized in this report for reference in Section 3.1. Five conceptual alternative packages of projects were developed to build on the 2030 Baseline. The five conceptual alternative packages are as follows:

- **Transportation System Management/Transportation Demand Management (TSM/TDM) Concept:** The TSM/TDM concept identifies improvements to increase the efficiency of the transportation system and improve mobility. Proposed projects include traffic signal coordination, park-and-ride facilities, bikeway improvements, and increased traffic monitoring. (Includes 2030 Baseline)
- **Street-Rapid Bus Concept:** This concept presents a multimodal approach concentrating on increasing freeway and street capacity and enhancing transit services across the county line. Proposed projects include arterial street widening, new rapid bus services, improved bus feeder services to Metrolink stations, and a grade separated bus rapid transit (BRT) service in the Pacific Electric Right of Way (PE ROW). (Includes 2030 Baseline and TSM/TDM Concept)
- **Freeway Concept:** The Freeway Concept proposes capacity improvements to freeways that serve traffic between Orange and Los Angeles counties. Proposals including adding a general purpose lane in each direction to the SR-91, I-405 and I-5 freeways either across or near the OC/LA county line. (Includes 2030 Baseline, TSM/TDM and Street-Rapid Bus concepts)
- **Transit Concept:** This concept is focused on transit oriented alternatives to increase transit service frequency, capacity, and connectivity to meet future travel demands. Projects proposed in this concept include new bus rapid transit services and a fully elevated transit service in the PE ROW. (Includes 2030 Baseline, TSM/TDM and Street-Rapid Bus concepts)
- **Public-Private Partnership Concept:** This concept is focused on identifying privately financed improvements to freeways, streets, and transit that could supplement the improvements that are possible with public funds. Concepts include high occupancy toll lanes in freeway corridors and high speed transit service in the PE ROW. (Includes 2030 Baseline, TSM/TDM and Street-Rapid Bus concepts)

Exhibit 3-1 illustrates the relationship between the 2030 Baseline projects and the five conceptual alternative packages. The TSM/TDM Concept and the Street-Rapid Bus Concept directly build on the 2030 baseline projects and incorporate all of the projects proposed as part of the previous concept. The 2030 Baseline, the TSM/TDM Concept, and Street-Rapid Bus

Concept form the backbone of projects and strategies to address transportation needs across the OC/LA county line. The Freeway Concept, Transit Concept, and Public-Private Partnership Concept each have a specific area of focus. The objective of these concepts is to provide OCTA and Metro with a range of alternatives to select from when developing formal alternatives for travel demand modeling and screening in future studies. This approach would allow for the eventual development of a locally preferred concept strategy that could incorporate improvements from all proposed concepts.

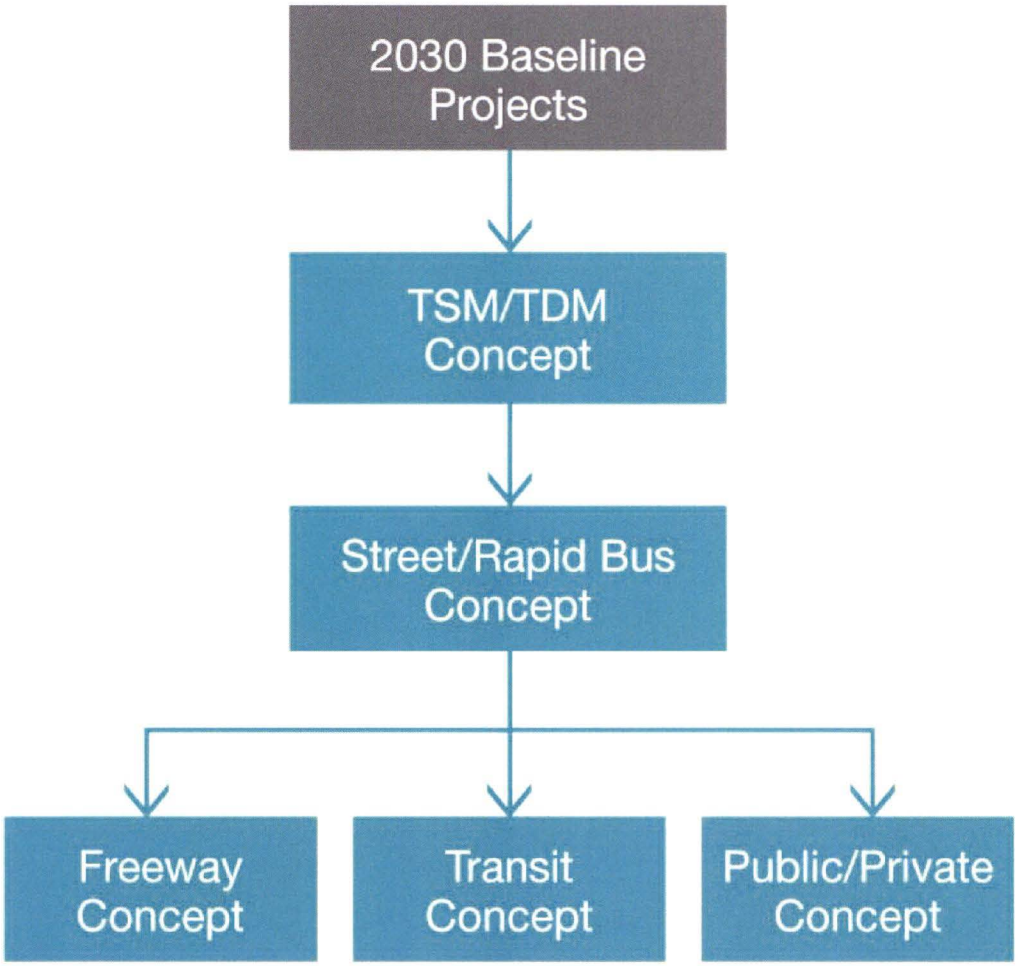


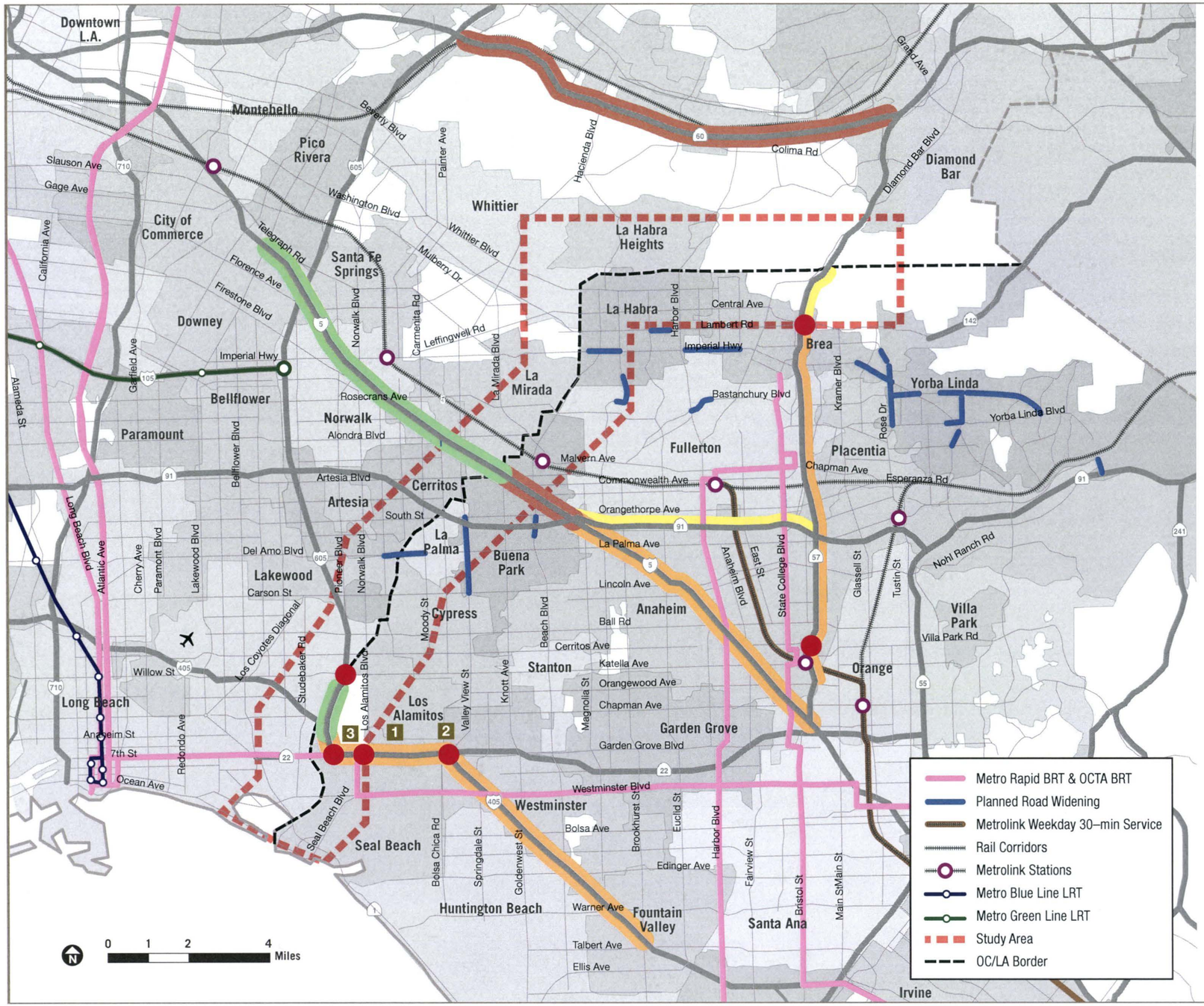
EXHIBIT 3-1 RELATIONSHIP OF CONCEPTUAL ALTERNATIVES

3.1 2030 Baseline Improvements

The 2030 Baseline projects includes freeway, arterial roadway, and transit projects that have a committed funding source and are planned to be completed by the year 2030. Freeway and transit enhancements are based on projects from the OCTA and Metro Long Range Transportation Plans (LRTP) under the Baseline and Constrained scenarios. Freeway projects from Orange County's Renewed Measure M Early Action Plan are also included. Arterial roadway projects were identified using city Capital Improvement Programs (CIPs) obtained from each city located along the OC/LA county line. The following section summarizes each project included in the 2030 Baseline. The projects are shown in Figure 3-2.

Exhibit 3-2 2030 Baseline Projects

July, 2008



Transportation projects included in the Baseline Year 2030 concept have a committed funding source and are planned for completion prior to the Year 2030. The components of the Baseline Year 2030 concept include the following:

- Freeway enhancement projects as identified in the adopted OCTA and Metro Long Range Transportation Plans (LRTP) (Baseline and Constrained projects only);
- In Orange County, Renewed Measure M Early Action Plan freeway projects;
- Arterial Roadway improvements as identified in study area city Capital Improvement Programs (CIPs);
- Planned enhancements by OCTA and Metro to local bus transit routes in the study area;
- New OCTA bus rapid transit routes on Harbor Boulevard, Westminster Avenue, and State College Boulevard/Bristol Street in Orange County;
- New Metro Rapid routes on Atlantic Boulevard and Long Beach Boulevard in Los Angeles County;
- The implementation of 30-minute headways for Metrolink service between Fullerton and Laguna Niguel/Mission Viejo in Orange County.

I-5 Freeway

- Add 1 general purpose lane & 1 HOV lane in each direction; improve interchanges from Rosemead Blvd – Orange county Line
- Add 1 general purpose lane & 1 HOV lane in each direction from SR-91 to County Line
- Improve from SR-57 to SR-91

I-405 Freeway

- Add 1 general purpose lane in each direction from Brookhurst – I-605 Auxiliary lanes between entrance ramps & downstream exit ramps at most locations
- 1 Add 1 HOV lane in each direction from SR–22 to I-605

I-605 Freeway

- Improve freeway access & arterial connection in communities of Los Alamitos & Cypress
- 3 New freeway-to-freeway carpool ramps to I-405
- Add HOV lane from I-405 to Orange County Line (Part of West Orange County Connectors Project)

SR-22 Freeway

- 2 Construct HOV connector to I-405

SR-57 Freeway

- Add new NB truck climbing lane from Lambert Rd – Tonner Canyon
- Add new NB lane from Orangewood Ave-Lambert Rd
- Reconfigure existing interchange & add SB lane off-ramp at Lambert Rd
- Construct HOV drop ramps to Cerritos Ave

SR-91 Freeway

- Add 1 WB lane from I-5 to SR-57

SR-60 Freeway

- Add 1 HOV lane in each direction from I-605 to Brea Canyon Road

Freeway Improvements

- I-5 Freeway: Improvements on this freeway include adding one general purpose lane and one high occupancy vehicle (HOV) lane in each direction in Los Angeles County from Rosemead Boulevard to the OC/LA county line, as well as adding one general purpose lane and one HOV lane in each direction in Orange County from SR-91 to the OC/LA county line. The section between SR-57 and SR-91 in Orange County is also scheduled to be improved through a restriping and minor capacity enhancement that would result in the addition of one more lane in each direction. This additional lane would widen the freeway to a total of 12 lanes (six in each direction) and could be either an additional general purpose lane or an additional HOV lane.
- I-405 Freeway: I-405 freeway improvements consist of adding one general purpose lane in each direction and auxiliary lanes in several locations in Orange County from Brookhurst Street to the I-605 freeway and adding a second HOV lane in each direction from the SR-22 freeway to the I-605 freeway.
- I-605 Freeway: Improvements on the I-605 freeway include improving freeway access and arterial connection in the communities of Cypress and Los Alamitos. New freeway-to-freeway direct connector HOV ramps to I-405 are also planned as part of the West Orange County Connectors project.
- SR-22 Freeway: Improvements on the SR-22 freeway include constructing HOV direct connectors to the I-405 freeway as part of the West Orange County Connectors project.
- SR-57 Freeway: Improvements on the SR-57 freeway including the addition of a new northbound truck climbing lane from Lambert Road to Tonner Canyon Road and adding a new northbound general purpose lane from Orangewood Avenue to Lambert Road. Both projects would occur in Orange County. The 2030 Baseline projects also include reconfiguring the existing interchange at Lambert Road and adding a southbound off-ramp lane at that location. The construction of HOV drop ramps to Cerritos Avenue is also included.
- SR-91 Freeway: Baseline improvements on SR-91 include the addition one westbound general purpose lane in Orange County from I-5 to SR-57.
- SR-60 Freeway: Baseline improvements for SR-60 include the addition one HOV lane in each direction in Los Angeles County from I-605 to Brea Canyon Road.

Arterial Roadway Improvements

Arterial roadway enhancements in the 2030 Baseline include streets that have funded capacity enhancements planned by the city that has jurisdiction over the roadway. A list of the arterial roadway enhancements is summarized in detail below in Table 3-1.

TABLE 3-1 – YEAR 2030 BASELINE ARTERIAL ROADWAY IMPROVEMENTS

ROADWAY	IMPROVED SEGMENT	EXISTING CONDITION	2030 BASELINE CONDITION
CITY OF BREA			
Birch Street	Flower Hill Street to Valencia Avenue	3 lanes (1 WB, 2 EB)	4 lanes
Rose Drive	Valencia Avenue to South City Limits	2 lanes	4 lanes
Imperial Highway	Valencia Avenue to Rose Drive	5 lanes (3 WB, 2 EB)	6 lanes
CITY OF BUENA PARK			
Valley View Street	Orangethorpe Avenue to Lincoln Avenue	4-5 lanes	6 lanes
Beach Blvd	SR-91 Eastbound on ramp	1 lane	2 lanes
CITY OF FULLERTON			
State College Boulevard	Valencia Avenue to Orangethorpe Avenue	4 lanes	6 lanes
Bastanchury Road	Harbor Boulevard to 1700' east of Harbor Boulevard	4 lanes	6 lanes
Gilbert Street	Castlewood Road to North City Limits	2 lanes	4 lanes
Imperial Highway	Harbor Boulevard to Berry Street	4 lanes	6 lanes
CITY OF LA HABRA			
Lambert Road	Euclid Street to Cypress Street	4 lanes	6 lanes
Imperial Highway	West City Limits to Idaho Street	5 lanes	6 lanes
CITY OF LA PALMA/CYPRESS			
La Palma Avenue/ Del Amo Boulevard	Del Amo Bridge over Coyote Creek	2 lanes	4 lanes
CITY OF YORBA LINDA			
Bastanchury Road	Eureka Avenue to Rose Drive	4 lanes	6 lanes
Bastanchury Road	Lakeview Avenue to Village Center Drive	n/a	New 4 lane roadway
Bastanchury Road	Lakeview Avenue to Eureka Avenue	2 lanes	4 lanes
Weir Canyon Road	SR-91 – La Palma Avenue	5 lanes (3 SB, 2 NB)	6 lanes

ROADWAY	IMPROVED SEGMENT	EXISTING CONDITION	2030 BASELINE CONDITION
Lakeview Avenue	Bastanchury Road - Oriente Drive	2 lanes	4 lanes
Lakeview Avenue	Oriente Drive – Yorba Linda Boulevard	2 lanes	4 lanes
Lakeview Avenue	Yorba Linda Boulevard – Buena Vista Avenue	4 lanes	6 lanes
Rose Drive	Yorba Linda Boulevard – Blake Road	4 lanes	6 lanes
Yorba Linda Boulevard	Lakeview Avenue to Imperial Highway	5 lanes (2 WB, 3 EB)	6 lanes

Source: City Capital Improvement Programs and Circulation Elements

Transit Improvements

OCTA and Metro have planned several enhancements to local bus transit routes in the study area, which include increasing spans of service and improving headways. Notable regional transit projects include enhancements to Metrolink service in Orange County, three new bus rapid transit (BRT) routes to be operated by OCTA, and two new Metro Rapid transit routes. The BRT services will feature higher capacity, more frequent services, and traffic signal prioritization. Regional transit improvements include:

- Metrolink 30-Minute Headways: OCTA is planning to increase Metrolink service between the Fullerton Transportation Center and the Laguna Niguel/Mission Viejo Metrolink Station by providing 30-minute headways in the Metrolink corridor on weekdays.
- Harbor Boulevard Bravo! BRT: This route follows Harbor Boulevard from Costa Mesa to the Fullerton Transportation Center and provides regional connections to Metrolink, Amtrak, and other OCTA bus services.
- Westminster Avenue Bravo! BRT: The Westminster Avenue BRT travels along 17th Street/Westminster Avenue to 7th Street with connections from Santa Ana to the Long Beach Transit Center.
- Brea to Irvine Bravo! BRT: The BRT route from Brea to Irvine starts at the Brea Mall and takes State College Boulevard to Bristol Street and then I-405 to the Irvine Transportation Center.
- Atlantic Avenue Metro Rapid Bus: The Atlantic Avenue Metro Rapid service operates along Atlantic Avenue from the Long Beach Transit Mall to east Los Angeles and Pasadena.
- Long Beach Boulevard Metro Rapid Bus: This route follows Long Beach Boulevard from the Long Beach Transit Center to downtown Los Angeles.

3.2 TRANSPORTATION SYSTEM MANAGEMENT/TRANSPORTATION DEMAND MANAGEMENT CONCEPT

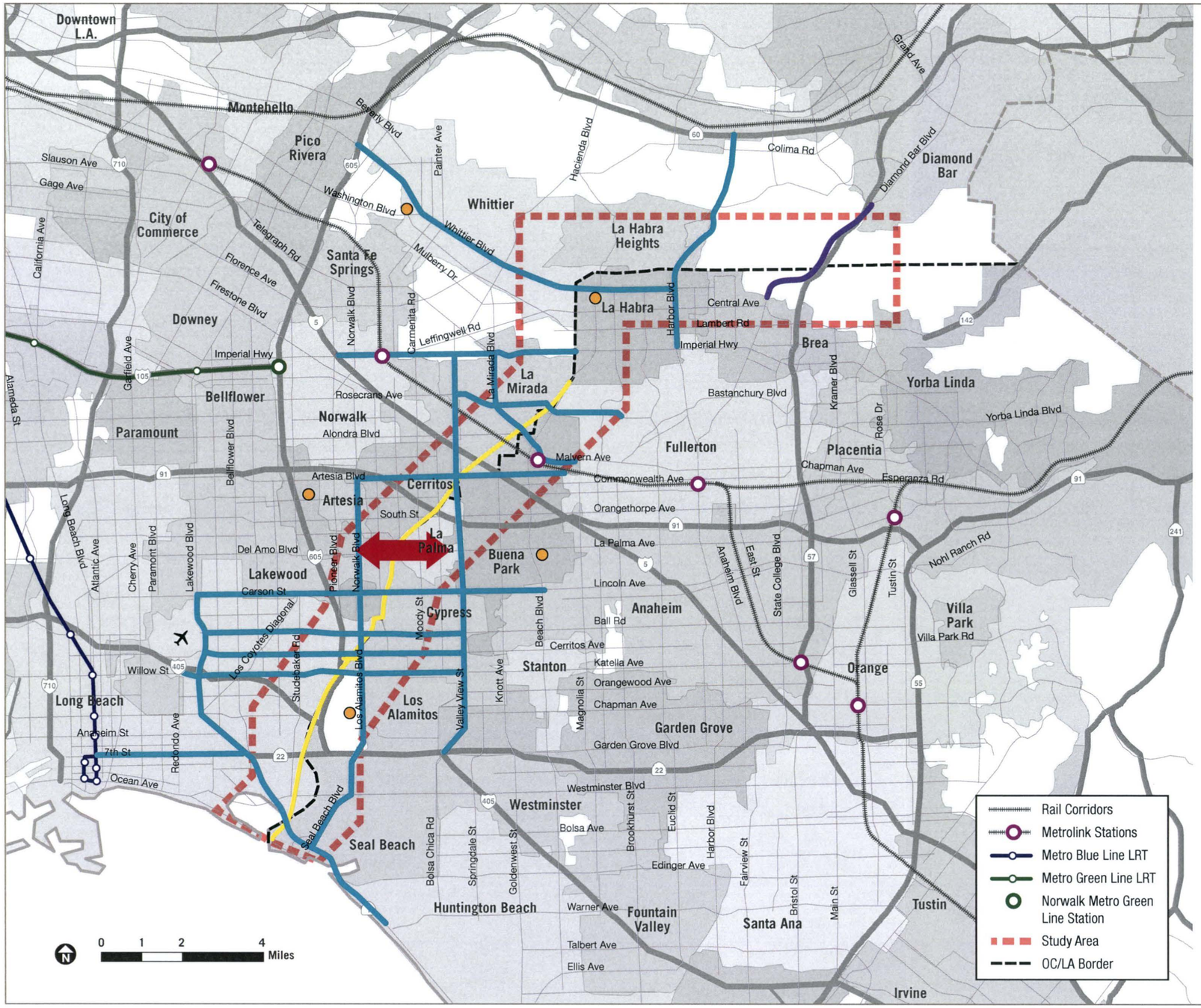
The TSM/TDM concept identifies improvements to increase the efficiency of the transportation system and improve mobility. The concept covers all modes of transportation, including freeways, roadways, transit, bicycle, and pedestrian. The projects included in the TSM/TDM Concept are shown in Exhibit 3-3.

Strategies to improve freeways and roadways incorporate freeway traffic monitoring upgrades on all freeways that traverse the study area and ramp metering at various locations. Safety and operational improvements consistent with Caltrans' State Highway and Operation and Protection Plan (SHOPP), including wider shoulders and lane widening, are proposed on Brea Canyon Road between the cities of Brea and Diamond Bar. Arterial roadway improvements include enhancements such as traffic signal coordination, bus turn-outs, and other improvements. The following roadway segments are proposed for these improvements:

- Pacific Coast Highway from Warner Avenue to Lakewood Boulevard
- 7th Street from SR-22 to Long Beach Boulevard
- Willow Street/Katella Avenue from Valley View Street to Redondo Avenue
- Carson Street/Lincoln Avenue from Beach Boulevard to Lakewood Boulevard
- Lakewood Boulevard from Pacific Coast Highway to Carson Street
- Artesia Boulevard from Gilbert Street to Norwalk Boulevard
- Rosecrans Avenue from Gilbert Street to Valley View Street
- La Mirada Boulevard from Burlingame Avenue to Imperial Highway
- Imperial Highway from the OC/LA county line to Pioneer Boulevard
- Whittier Boulevard from Harbor Boulevard to I-605
- Harbor Boulevard from Imperial Highway to SR-60
- Cerritos Avenue/Spring Street from Valley View Street to Lakewood Boulevard
- Ball Road/Wardlow Road from Valley View Street to Lakewood Boulevard
- Seal Beach Boulevard/Los Alamitos Boulevard/Norwalk Boulevard from Pacific Coast Highway to Artesia Boulevard
- Valley View Street from SR-22 to Imperial Highway

Exhibit 3-3 TSM/TDM Concept

July, 2008



The Transportation System Management (TSM) and Transportation Demand Management (TDM) Concept includes strategies to increase the efficiency of the transportation system and improve mobility across the OC/LA county line. The TSM/TDM concept focuses on increasing local bus coordination, implementing traffic signal coordination on streets near and across the county line to reduce congestion, and increased freeway traffic monitoring. This alternative also includes the construction of additional park-and-ride and transit center facilities. The TSM/TDM Concept is included in all of the following alternatives.

Note: Includes Year 2030 Baseline Improvements

Freeways/Roadways

- Include Goods Movement Intelligent Transportation Systems (ITS) Integration
- Upgrade freeway traffic surveillance on all study area freeways
- Upgrade freeway ramp metering at various locations
- Enhance arterial roadways (Traffic Signal Coordination, bus turn-outs, and other improvements) on the following corridors:
  - Pacific Coast Hwy from Warner Ave to Lakewood Blvd
  - 7th St from SR-22 to Long Beach Blvd
  - Willow St/Katella Ave from Valley View St to Redondo Ave
  - Carson St/Lincoln Ave from Beach Blvd to Lakewood Blvd
  - Lakewood Blvd from Pacific Coast Hwy to Carson St
  - Artesia Blvd from Gilbert St to Norwalk Blvd
  - Rosecrans Ave from Gilbert St to Valley View St
  - La Mirada Blvd from Burlingame Ave to Imperial Hwy
  - Imperial Hwy from County line to Pioneer Blvd
  - Whittier Blvd from Harbor Blvd to I-605
  - Harbor Blvd from Imperial Hwy to SR-60
  - Cerritos Ave/Spring St from Valley View St to Lakewood Blvd
  - Ball Rd/Wardlow Rd from Valley View St to Lakewood Blvd
  - Seal Beach Blvd/Los Alamitos Blvd from Pacific Coast Hwy to Artesia Blvd
  - Valley View St. from SR-22 to Imperial Hwy.
- Offer Carpool/Vanpool incentives
- Interlink city Traffic Management Centers (TMC) and Caltrans District 7 and 12 TMCs
- Increase CCTV locations
- Implement real-time traffic information
- Add alternative work hours
- Add incident management
- Implement safety and operational improvements consistent with Caltrans State Highway Operation and Protection Plan on Brea Canyon Road.

Transit

- Increase local bus coordination between counties
- Increase local bus service frequency and span of service
- Add Park and Ride Lots in cities of Artesia/Cerritos, Buena Park, La Habra, Seal Beach/Los Alamitos and Whittier
- Improve transit service information distribution (i.e. kiosks at malls and transit centers)

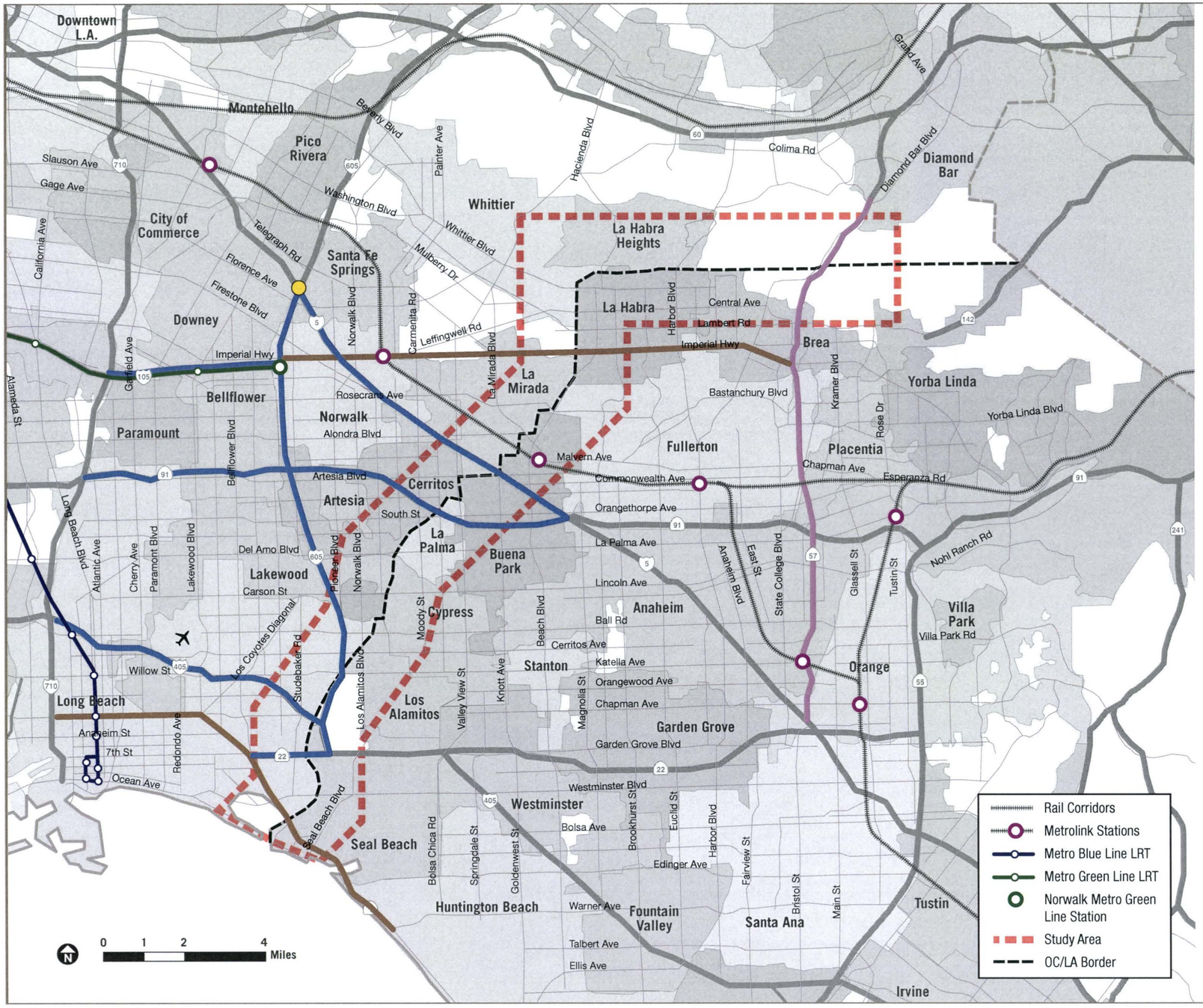
Bike/Pedestrian

- Enhance Coyote Creek Bikeway
- Add new bicycle corridors over Coyote Creek and along rail lines

Increase Local Bus Coordination
Arterial Corridor Improvements
Safety and Operational Improvements
Bikeway Enhancement
New Park-and-Ride Lot

OCTA Metro

IBI GROUP



The Freeway Concept proposes improvements to freeways that increase capacity with the objective of improving traffic conditions in the year 2030. The concept includes adding capacity to all study area freeways through new general purpose lanes, High Occupancy Vehicle (HOV) lanes, or High Occupancy Toll (HOT) lanes.

This concept includes Year 2030 Baseline, TSM/TDM and Street/Rapid Bus improvements

Freeway/Roadway

- Add one general purpose lane in each direction on:
  - I-5 from SR-91 to I-605
  - I-405 from I-605 to I-710
  - I-605 from I-405 to I-5
  - SR-22 from I-405 to Pacific Coast Hwy
  - SR-91 from I-5 to I-710
  - I-105 from I-605 to I-710
- Add one southbound lane on SR-57 from Diamond Bar Boulevard to I-5
- Convert arterial roadways to Parkways (grade separated intersections, exclusive lanes, and other improvements) on the following corridors:
  - Pacific Coast Hwy from Warner Ave to I-710
  - Imperial Hwy from SR-57 to I-605

3.5 TRANSIT CONCEPT

The Transit Concept identifies strategies and projects to increase transit service frequency, capacity, and connectivity to serve future travel demand. The objectives of this concept are to improve transit services for both short and long distance trips, improve the efficiency of local transit services, increase Metrolink service, extend planned rapid bus routes, and provide improved connections between different modes of transportation. This concept includes all 2030 Baseline, TSM/TDM Concept, and Street/Rapid Bus Concept improvements.

The projects proposed in this concept include:

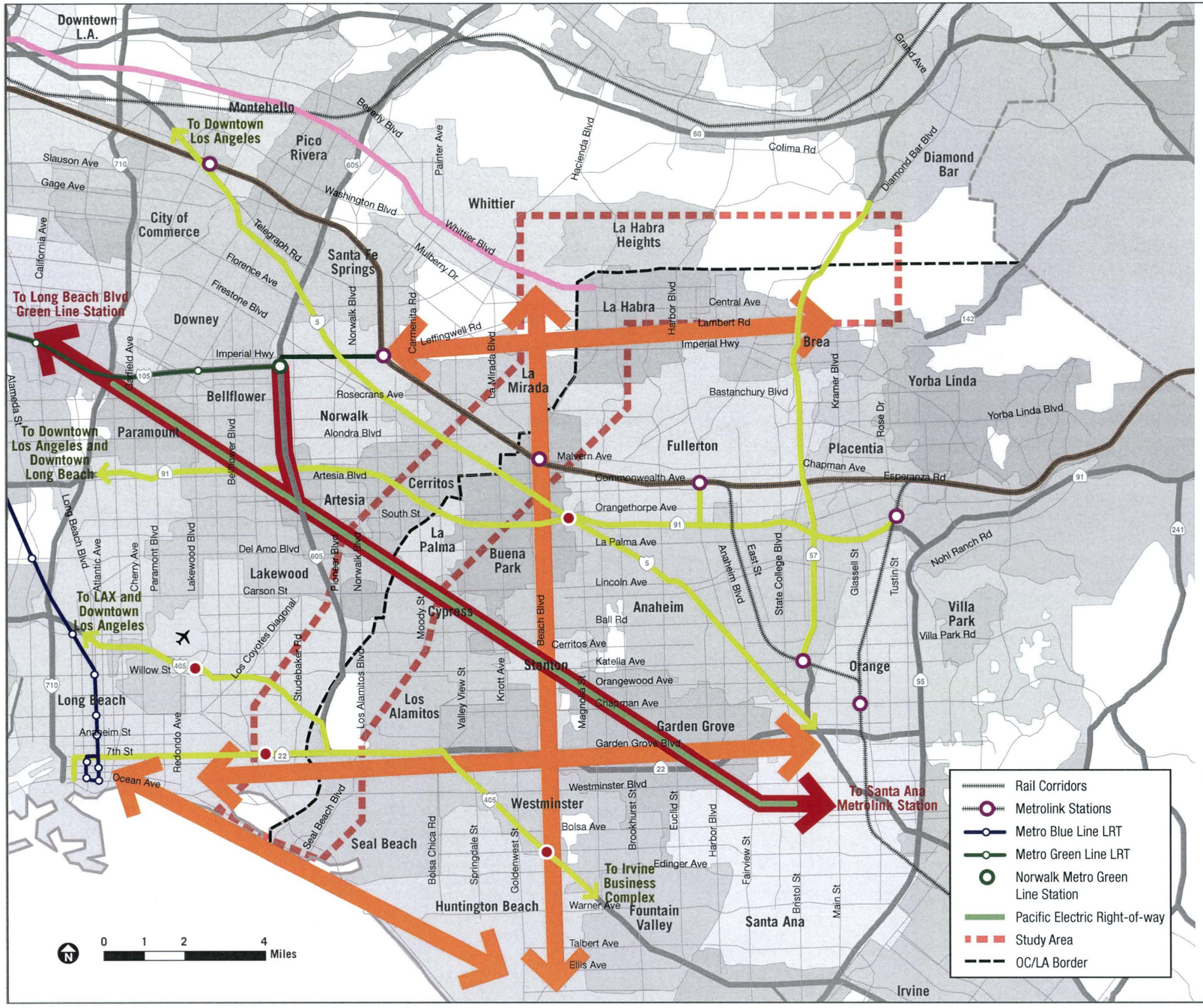
- Increase the frequency of Metrolink commuter rail service on the Orange County Line from Fullerton to Downtown Los Angeles and on the 91 Line from Corona to Downtown Los Angeles. This improvement requires additional rail track capacity and grade separations in the Burlington Northern Santa Fe (BNSF) rail corridor.
- Extend the Metro Green Line LRT from the Norwalk Green Line Station to the Norwalk/Santa Fe Springs Metrolink Station.
- Add Freeway-based express bus services as follows:
    - Irvine Business Complex to Long Beach Transit Mall via I-405 and SR-22
    - Irvine Business Complex to downtown Los Angeles via I-405 and I-110
    - Santa Ana Metrolink Station to downtown Los Angeles via I-5
    - Anaheim Canyon Metrolink Station to downtown Long Beach via SR-91 and I-710
    - Anaheim Metrolink Station to Diamond Bar via SR-57
- Add new BRT routes operating in exclusive travel lanes. Connections between the destinations listed below are proposed. The specific alignment of these routes is yet to be determined.
    - Huntington Beach to Whittier
    - Brea Mall to Norwalk/Santa Fe Springs Metrolink Station
    - Downtown Long Beach to Anaheim/Santa Ana
    - Downtown Long Beach to Irvine Business Complex/John Wayne Airport
- Upgrade the grade separated BRT service in the PE ROW to a fully elevated transit service, either BRT or LRT. The proposed connection to the Metro Green Line and an at-grade pedestrian/bike path within the corridor are maintained.

Add a rapid bus route on Whittier Boulevard from Beach Boulevard to Metro Gold Line Eastside Extension.

Cross sections illustrating several of the proposed transit improvements are provided in the Appendix of this report. Projects included in the Transit Concept are shown in Exhibit 3-6.

Exhibit 3-6 Transit Concept

July, 2008



The Transit Concept looks exclusively at transit oriented alternatives to accommodate future travel demand. The objectives of this concept are to improve transit services for both short and long distance trips, improve the efficiency of local transit services, increase Metrolink service, enhance planned Rapid Bus routes, and provide connections between different modes of transportation.

This concept includes Year 2030 Baseline, TSM/TDM and Street/Rapid Bus improvements

Transit

- Increase Metrolink weekday frequency on the Orange County Line from Fullerton to Downtown Los Angeles and 91 Line from Corona to Downtown Los Angeles (Assumes 3rd main track and grade separations)
- Implement Rapid Bus on Whittier Blvd from Beach Blvd to Downtown Los Angeles
- Extend Metro Green Line Light Rail Transit (LRT) to Norwalk/Santa Fe Springs Metrolink Station
- Add Express bus services along the following corridors:
  - Irvine Business Complex to Long Beach Transit Mall via I-405 and SR-22
  - Irvine Business Complex to Downtown Los Angeles via I-405 and I-110
  - Santa Ana Metrolink Station to Downtown Los Angeles via I-5
  - Anaheim Canyon Metrolink Station to Downtown Long Beach via SR-91 and I-710
  - Anaheim Metrolink Station to Diamond Bar via SR-57
- Replace the grade separated Bus Rapid Transit (BRT) service in the Pacific Electric Right of Way (PE ROW) with a fully elevated transit service (bus or rail). Maintain the proposed connection to the Metro Green Line and an at-grade pedestrian / bike path within the corridor.
- Enhance selected rapid bus lines proposed in the Street / Rapid Bus Concept to full Bus Rapid Transit service operating in exclusive rights of way (specific alignment to be determined) connecting:
  - Huntington Beach to Whittier
  - Brea to Norwalk
  - Long Beach to Anaheim/Santa Ana
  - Long Beach to Irvine

3.6 PUBLIC-PRIVATE PARTNERSHIP CONCEPT

The Public-Private Concept focuses on identifying privately financed projects for freeways, streets, and transit that could supplement the improvements that are possible with public funds. Concepts include toll lanes and high occupancy toll lanes on freeway corridors and high speed transit services in the PE ROW. This concept includes all improvements in the 2030 Baseline, TSM/TDM Concept, and Street/Rapid Bus Concept.

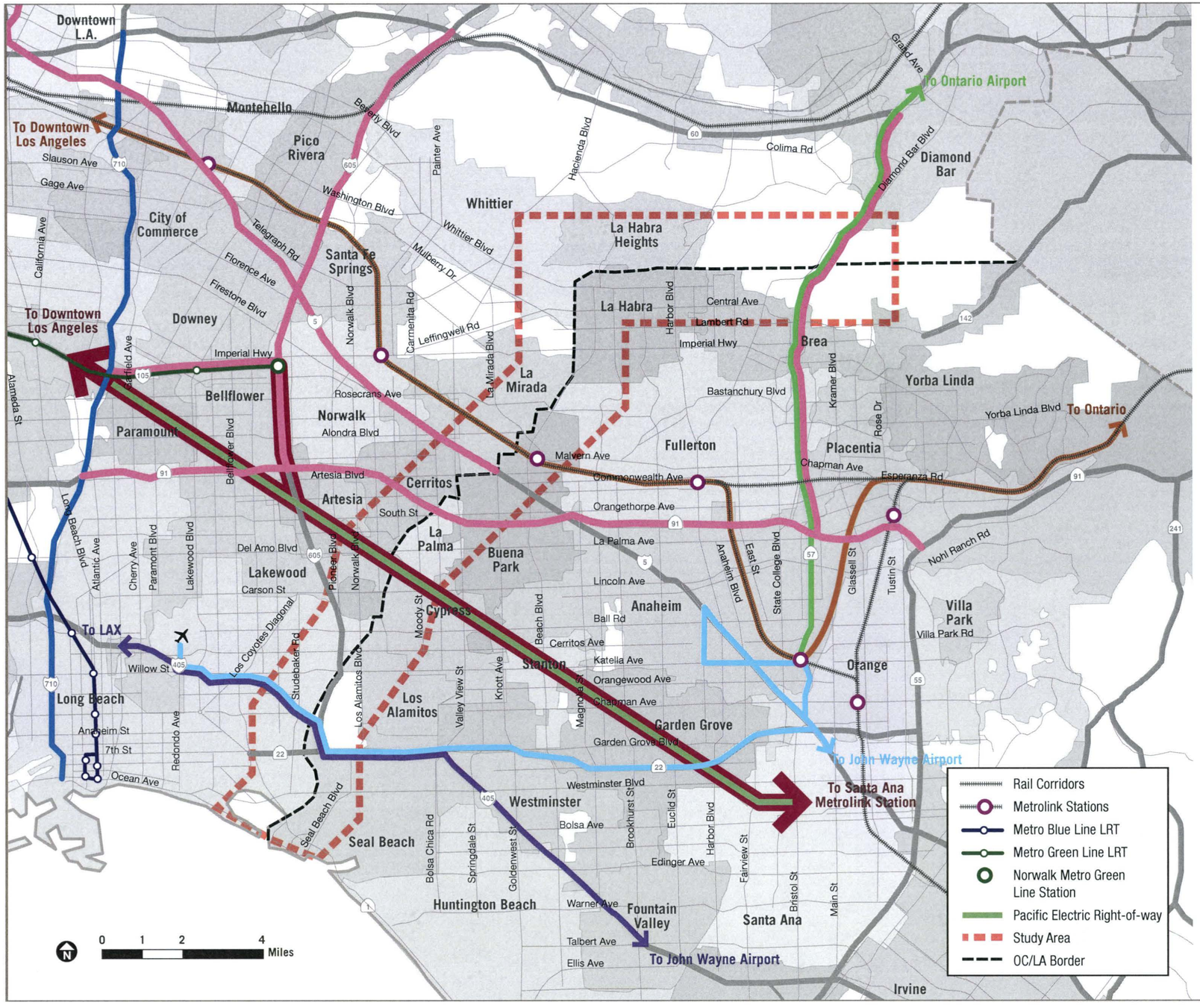
The projects proposed in this concept include:

- Add truck toll lanes on the I-710 from Ocean Avenue in Long Beach to SR-60. This option is currently being studied as part of Metro's I-710 preliminary engineering and environmental study.
- Convert existing or planned HOV lanes to high occupancy toll (HOT) lanes and add one additional HOT lane to the following freeway segments:
    - I-5 from OC/LA county line to downtown Los Angeles
    - I-105 from I-605 to I-710
    - I-605 from SR-91 to SR-60
    - SR-91 from SR-55 to I-710
    - SR-57 from SR-91 to SR-60
- Provide new Fly-Away bus shuttle service connections to Southern California airports. In addition to transporting passengers to and from airports, the bus shuttle service could also serve commuter trips for employment centers located near the airports. The three proposed bus shuttle services connect:
    - John Wayne Airport to Anaheim and Long Beach Airport via I-405 and SR-22
    - John Wayne Airport to Long Beach Airport and Los Angeles International Airport via I-405
    - Anaheim Regional Intermodal Transportation Center (ARTIC) to Ontario Airport via SR-57 and I-10
- Implement an elevated high speed transit system from the Santa Ana Metrolink Station to Downtown Los Angeles using the Pacific Electric Right of Way and existing freeway and railroad corridors.

Cross sections illustrating the proposed toll lane and transit improvements are provided in the Appendix of this report. The Public-Private Partnership Concept projects are shown in Exhibit 3-7.

Exhibit 3-7 Public-Private Partnership Concept

July, 2008



The Public-Private Partnership Concept focuses on identifying privately financed improvements to freeways, streets, and transit that could supplement the improvements that are possible with public funds. Concepts include toll lanes and truck toll lanes on freeway corridors and high-speed transit service in the Pacific Electric Right of Way (PE ROW).

This concept includes Year 2030 Baseline, TSM/TDM and Street/Rapid Bus improvements

- Add truck toll lanes on I-710 from Ocean Ave to SR-60
- Add High Occupancy Toll (HOT) or Toll Lanes on:
  - I-5 from OC/LA County Line to downtown Los Angeles
  - I-105 from I-605 to I-710
  - I-605 from SR-91 to SR-60
  - SR-91 from SR-55 to I-710
  - SR-57 from SR-91 to SR-60
- Add Bus Shuttle Service connection from John Wayne Airport to Anaheim and Long Beach Airport via I-405 and SR-22
- Add Bus Shuttle Service connection from John Wayne Airport to Long Beach Airport and Los Angeles International Airport via I-405
- Add Bus Shuttle Service connection from Anaheim to Ontario Airport via SR-57
- Implement elevated High Speed Transit system on the PE ROW to Downtown Los Angeles with possible connection to Norwalk Green Line Station

3.7 Additional Projects for Consideration

The public and agency outreach effort for the OC/LA Intercounty Transportation Study has involved the presentation of the draft Conceptual Alternatives to elected officials, public agency technical staff, citizen's committees, and the general public. A substantial amount of input has been received about the projects and strategies proposed in the Conceptual Alternatives, along with suggestions for additional projects to be considered. The input and comments have been documented and will be carried forward into any future phases of this study effort for consideration during the project evaluation and screening tasks.

Numerous additional projects were submitted for consideration and inclusion in the Conceptual Alternatives. These suggested projects have been allocated to the appropriate Concept and are summarized below.

TSM/TDM Concept

- Add traffic signal coordination to the following arterial streets:
  - Del Amo Boulevard/La Palma Avenue from Lakewood Boulevard to Beach Boulevard
  - South Street/Orangethorpe Avenue from I-605 to Beach Boulevard
- Consider additional bikeway improvements, particularly east-west connections between the Coyote Creek and Santa Ana River bike trails.

Street-Rapid Bus Concept

- Allow for additional rapid bus or BRT routes to utilize portions of the proposed PE ROW grade separated BRT corridor to benefit from the exclusive transit lanes

Freeway Concept

- Explore additional streets to include in the Parkway concept including Katella Avenue/Willow Street and Lincoln Avenue/Carson Street

Transit Concept

- Coordinate with other Orange County cities such as Santa Ana and Garden Grove which are exploring options for transit service and new roadways in portions of the PE ROW

Public-Private Partnership Concept

- Extend the high occupancy toll (HOT) lanes on the I-605 freeway from SR-91 to I-405
- Add high occupancy toll (HOT) lanes on the I-405 freeway from I-605 to I-105

Each of the suggested projects will be reviewed by OCTA and Metro and a determination made on their inclusion in the evaluation and screening process prior to the initiation of a future phase for this study effort.

4 PUBLIC AND AGENCY INVOLVEMENT

The OC/LA Intercounty Transportation Study included a public participation component designed to keep stakeholders informed of project developments and garner input on the Conceptual Alternatives. Public agencies were also involved in the study effort at both the technical staff level and policy-elected official level. The public and agency involvement activities completed for the OC/LA study is summarized below.

4.1 PUBLIC INVOLVEMENT

The public involvement components of the OC/LA study included the following efforts:

- Study Announcement Card
- Project Study Website
- Public Open Houses

Study Announcement Card

To initiate the outreach effort, OCTA and Metro developed a tri-fold full-color announcement card that served both as a project brochure and survey instrument. This card provided stakeholders and the public with an overview of the study goals, objectives and geographical boundaries. It also included a map of the study area and a perforated public survey inquiring about existing travel patterns and perspective on potential transportation improvements.

Throughout the course of this study, approximately 2,820 announcement cards were circulated using various distribution methods. Initially 1,370 cards were sent to residents, elected city officials, and stakeholders in the business and education community included in the project database. Subsequently, additional cards were distributed to project area cities and chambers of commerce for placement on their public counters, newsletters and websites. In addition, OCTA and Metro distributed a press release announcing the project and survey.

The announcement card including the project brochure and survey were very well received. A total of 155 surveys were completed; 85 were mailed to OCTA and 70 were completed using the OCTA project webpage.

Respondents provided feedback regarding their commutes and preferences for transportation improvements between the two counties. When asked to rank modes of transportation for improvement; respondents clearly identified freeways as the number one priority for transportation improvement, followed by streets and roads. Question five asked respondents to identify the most important route of service that needs improvement, respondents remained consistent; voting for the Interstate 5 Freeway as the top improvement priority.

Project Study Website

A project website was established through www.octa.net, providing the general public with instant project updates and invitations to the open houses and surveys. OCTA and Metro released a second survey through the Project Study Website specifically designed to collect input on the conceptual alternatives. A total of 41 surveys were completed via online and at the open houses. Of the 41 surveys, 39% were completed by residents of Orange County and 10% by residents of Los Angeles County. 51% of the survey respondents chose not to list where they resided. The survey asked respondents to prioritize transportation options in terms of high, medium, and low priority.

The survey results are summarized as follows:

- Transit related projects were ranked the highest among transportation options that are in most need of improvement, with light rail transit (73%) and Metrolink/Amtrak (67%) services being the top two, followed by local bus transit operating on streets (46%) and Express bus transit operating on freeways (39%). While freeways had 32% high priority votes, it also scored 39% low priority votes. Streets scored the highest in medium priority votes with 49% and toll roads and high occupancy lanes (2%) received the fewest high priority votes and the most (71%) low priority votes.
- Respondents showed support for adding general purpose lanes to freeways and adding carpool lanes or toll lanes. The I-5, I-405, and SR-91 were identified as the highest priorities.
- Strong support was registered for implementing traffic signal coordination on streets.
- Light rail transit was the most suggested type of new transit service followed by increasing Metrolink commuter rail services and increasing express bus services. New bus rapid transit serves also received support.
- With regard to the PE ROW, 68% of respondents strongly supported implementing a light rail service that is fully elevated above existing streets and 61% of respondents strongly supported implementing elevated high speed transit above existing streets. By comparison, 34% of respondents strongly supported or supported a bus rapid transit that is fully elevated above existing streets and 32% of respondents supported an at-grade bus rapid transit service or street car service with grade separated crossings at intersections. An overwhelming 68% of respondents strongly opposed no transit service in the PE ROW.

Two additional open-ended questions were also included in this survey for respondents to leave additional suggestions or comments that were not discussed in the survey. The two open-ended questions were:

1. What specific issues or additional improvements need to be added to the study, if any?
2. Please offer any additional comments or suggestions pertaining to the OC/LA Intercounty Transportation Study.

Common responses and suggestions included:

- Transit service in PE ROW. Respondents left several comments suggesting some type of transit service on the PE ROW, including light rail, underground subway, high speed, etc. Each of these comments emphasized a form of transit that was fast and efficient, and could get passengers to and from Orange County and Los Angeles County quickly.
- Better connections between different modes of transit. Several of the respondents described having to take multiple types of transit before being able to reach their destination. The respondents stated that it would be much easier to travel between different modes if there was a single pass they could use for each service, rather than have to use several different bus or rail passes for each.
- Connect the Norwalk Metro Green Line Station with the Norwalk/Santa Fe Springs Metrolink Station. Connecting the Norwalk Metro Green Line Station with the

Norwalk/Santa Fe Springs Metrolink Station was a common suggestion among survey responses.

- Focus on transit improvements rather than freeway improvements. Respondents stated that rather than improve freeways, the study should focus on more transit improvements. Respondents felt that freeway improvements would only improve congestion on a short term basis whereas transit improvements would help alleviate congestion in the long run. Long distance trips that connect Los Angeles, Long Beach, Santa Ana, and Anaheim were requested.
- Improve bikeway connections and pedestrian walkways. Several of the comments requested improving bikeway connections between the county for a continuous bike path and improving pedestrian facilities.

Public Open Houses

OCTA and Metro hosted two Public Open Houses, one in Los Angeles County, at the La Mirada Resource Center and the second in Orange County, at the Cypress Community Center.

The Public Open Houses were strategically located in the northern and southern areas of the study corridor in an attempt to serve the project area communities. Table 4.1 identifies the public open house dates, locations and time.

TABLE 4.1 OPEN HOUSE LOCATIONS

Public Open House Date	Location	Time
Tuesday, May 13, 2008	City of La Mirada, Resource Center 13710 La Mirada Boulevard, La Mirada	5:00 p.m. – 7:00 p.m.
Thursday, May 15, 2008	Cypress Community Center 5700 Orange Avenue, Cypress	5:00 p.m. – 7:00 p.m.

Participation at the public open house meetings included over 20 community members attending the two meetings. Participation included residents, businesses, press representatives, and city staff members.

Comments received from members of the public at the open house meetings included in the following:

- The study should promote the addition of bikeways, both on-street and off-street to address existing and future needs for bicyclists. Regional non-motorized transportation should be considered.
- Create a bikeway steering committee or subcommittee associated with the study, and prepare a bikeway interface plan to identifies and recommends solutions to gaps in regional and local non-motorized transportation.
- The emphasis of the study should be on mass transit and bikeways. Bike safety needs to be considered in the design of street improvements.

- Maglev or other forms of high speed transit should be considered in the Pacific Electric Right of Way.
- Public/Private partnerships should be used to deliver transit projects.
- The distribution of transit information is imperative to improve travel across the county line.
- The gap between the Norwalk Metrolink Station and the Norwalk Metro Green Line station should be addressed with a new transit service.
- Better coordination of existing transit services across the county is necessary.
- Consider the use of Whittwood Mall in Whittier as a transit hub and connection point for OCTA and Metro buses. Extend OCTA routes from La Habra into Whittier and the Whittwood Mall.
- Extend the Whittier Greenway Bike Trail to La Habra.
- Extend proposed Metro Eastside Gold Line extension through Whittier to La Habra.
- Supportive of bikeway enhancements along Coyote Creek.
- Toll lanes may be difficult for commuters to afford with rising prices for gasoline.
- Bicycle paths and bicycle routes should receive more emphasis and funding for the construction of new routes, bike stations, and more bicycle storage space on Metrolink trains.

Additional detail on the public comments received at the Open Houses is available in the Public Participation Report, submitted to OCTA in July 2008.

4.2 AGENCY INVOLVEMENT

Public agencies involved in the OC/LA Study included OCTA and Metro, local cities located along the county line in Orange County and Los Angeles County, Caltrans Districts 7 and 12, the Gateway Cities Council of Governments (GCCOG), and the Southern California Association of Governments (SCAG). Technical staff members from these agencies were involved through the Technical Working Group (TWG), which was established to provide a forum for discussion and review of the study findings and recommendations. Elected officials were involved in the study effort through two Elected Officials Workshops that provided an update on the study process and an opportunity for policy makers to contribute to development of the Conceptual Alternatives.

Technical Working Group

The TWG was comprised of representatives from each study area city to provide local perspective and input for the study. City public works directors, engineers, and planners make up the majority of participants. Representatives from Caltrans Districts 7 and 12, SCAG, GCCOG, the San Gabriel Valley Council of Governments (SGVCOG) and the I-5 Joint Powers Authority (JPA) were also part of the TWG. Six TWG meetings were conducted during the study. A brief summary of each meeting is provided below:

- TWG Meeting #1 (August 7, 2007) - The objective of this meeting was to introduce the study and provide background information about the study to TWG members. The

meeting included presentations and discussion on the study scope of work, schedule, objectives, and the five biggest intercounty transportation issues.

- TWG Meeting #2 (September 27, 2007) - The purpose of the second TWG meeting was to present existing and 2030 Baseline conditions for demographics and the transportation network in the study area. TWG members were then able to review the 2030 Baseline conditions.
- TWG Meeting #3 (November 15, 2007) - The purpose of this meeting was to present the results of the travel demand modeling process and for TWG members to give input on issues they wish to be included in the purpose and need report.
- TWG Meeting #4 (January 10, 2008) – This meeting included the presentation of the study Corridor Mobility Problem and Purpose and Need Statement. Copies of the Purpose and Need Report were distributed to members of the TWG for review and comment. An initial discussion of the Conceptual Alternatives was also conducted.
- TWG Meeting #5 (February 21, 2008) – The agenda for this meeting focused on the draft Conceptual Alternatives, providing TWG members with an opportunity to review the alternatives and provide input regarding additional projects that could be considered.
- TWG Meeting #6 (April 15, 2008) – This meeting was focused on providing TWG members with an update on the development of the Conceptual Alternatives, following presentations to the OCTA Highways Committee and Board of Directors. The meeting also included an update on the 91/605/405 Study from the GCCOG and a presentation on Personal Rapid Transit by PRT Strategies, Inc.

Elected Officials Workshops

During the course of the project, OCTA and Metro hosted two Elected Officials Workshops (one in each county). The purpose of these workshops was to inform the elected officials representing the corridor cities of the study effort and gather feedback on the study objectives and conceptual alternatives. Mayors from all project cities, as well as county, state and federal elected representatives were invited to attend both workshops. Both workshops were well attended. Table 4.2 identifies the public open house dates, locations and time.

TABLE 4.2 ELECTED OFFICIALS WORKSHOP LOCATIONS

Workshop Date	Location	Time
Thursday, December 13, 2007	Cerritos Park East Community Center 13234 166th Street, Cerritos	1:30 p.m. – 3:00 p.m.
Wednesday, April 30, 2008	Joint Forces Training Base, Los Alamitos 4522 Saratoga Avenue, Los Alamitos	10:00 a.m. – 11:30 a.m.

The first Elected Officials Workshop was held in Los Angeles County, in the City of Cerritos with over 20 elected representatives attending. The facilitated workshop opened with an introduction of the project team and attendees followed by a PowerPoint Presentation of the study's background and overview. Sarah Catz facilitated a group exercise with the elected officials using Turning Point software. This allowed participants to vote electronically to prioritize projects and issues, viewing the results instantaneously.

The twelve question facilitated survey polled officials about topics including the highest priority freeways in need of improvement, the types of improvements that should be considered for freeways, streets, and transit, and the level of support for transit service in the PE ROW. The results of the survey are available in the Public Participation Report, submitted to OCTA in July 2008.

The second Elected Officials Workshop was held in Orange County in the City of Los Alamitos, with again over 20 elected officials participating. Like the first workshop, this session was also facilitated by Sarah Catz. The workshop began with a brief PowerPoint presentation, providing an overview of the study's progress and conceptual alternatives. Participants were then asked to participate in individual group discussions where facilitators led a discussion of the conceptual alternatives.

At the conclusion of the facilitated group sessions, each group had the opportunity to share their findings with the rest of the participants. There was some consensus among the entire workshop participants, particularly in supporting increased traffic signal coordination, considering additional freeway general purpose lanes to improve the crossing between the two counties, and improving transit services.

The discussion revealed support for a grade separated rail system in the PE ROW. Support for extending the Green Line to the Metrolink station in Norwalk was also mentioned. However, there did not appear to be much support for the Public/Private Partnership Concepts at this time.

Agency Presentations

The agency outreach effort also included presentations to various boards, committees, and councils to provide updates on the study process and obtain input on the Conceptual Alternatives. These presentations are summarized below:

- Los Alamitos City Council Meeting (November 19, 2007) – Provided a brief overview of the study effort and objectives.
- OCTA Citizens Advisory Committee (January 15, 2008 and May 20, 2008) – The first presentation summarized the study Corridor Mobility Problem and Purpose and Need Statement. The second presentation offered members of the Committee an opportunity to provide input on the Conceptual Alternatives.
- SCAG Regionally Significant Transportation Investment Studies (RSTIS) Peer Review Group Meeting (March 27, 2008) - Presented the draft Conceptual Alternatives.
- GCCOG Transportation Committee (April 2, 2008) – Presented the draft Conceptual Alternatives. The committee members were supportive of the study.
- Metro Gateway Sector Council (June 12, 2008) – Presented the draft Conceptual Alternatives. The council members were supportive of the study.

Agency Written Correspondence

Several public agencies provided written comments on the Conceptual Alternatives. These comments are documented in this report and would be carried forward in any future studies that evaluate and screen the Conceptual Alternatives. Copies of the written correspondence received from each agency are provided in the Appendix. Comments are summarized below:

- City of Brea – City staff stated that the city would not support the Tonner Canyon Corridor proposed as part of the Street and Rapid Bus Concept.
- City of Diamond Bar – The City requested that Brea Canyon Road be maintained as a two-lane roadway as the regional traffic using this corridor adversely impacts adjacent residential and community land uses. The City is advancing a potential improvement to widen the SR-57 freeway as part of a proposed private development. The City also requested that an alternative terminus point other than the SR-60 be considered for the I-710 truck toll lanes proposed in the Public/Private Partnership Concept.
- City of La Habra – City staff stated that the City would not support arterial corridor improvements or widening on Harbor Boulevard north of Whittier Boulevard and rapid bus services on Harbor Boulevard north of Whittier Boulevard. The city also suggested that the proposed widening of Whittier Boulevard be terminated at Beach Boulevard and not extend east of this point. This last comment was incorporated into the Conceptual Alternatives.
- Gateway Cities Council of Governments – Consider additional streets for traffic signal coordination including Telegraph Road and Imperial Highway. Consider direct carpool lane connectors at the SR-91/I-605 and SR-60/I-605 interchanges. Extend the SR-91 widening in the Freeway Concept to the I-710. Finally, the GCCOG has taken a policy stance to oppose truck toll lanes on the SR-91, I-605, I-405, and I-105 freeways, as well as on the I-710 north of I-5.
- United States Navy – The Navy commented on the proposed widening of Pacific Coast Highway from four to six lanes through the Naval Weapons Station Seal Beach. The Navy identified concerns about the street widening impacting safety associated with the handling of explosives and munitions, base security, and impacts to endangered and threatened species habitat that exists on the base.

5 NEXT STEPS

The OC/LA Intercounty Transportation Study has identified transportation needs and issues between Orange County and Los Angeles County, and has developed a set of Conceptual Alternatives intended to address these transportation needs and issues. This was a scoping study that focused on the identification of as many projects and improvements as possible to improve transportation and mobility across the OC/LA county line. Recommended future efforts include the evaluation and screening of the projects identified in the Conceptual Alternatives to develop a preferred set of projects designed to meet the Purpose and Need Statements established in this work effort. This section summarizes the key findings and recommendations of the OC/LA Intercounty Transportation Study.

5.1 KEY FINDINGS

The travel demand forecasts developed as part of the Corridor Mobility Problem and Purpose and Need Statement highlight the challenges facing residents and commuters traveling across the OC/LA county line in the Year 2030. Travel demand between the two counties is forecast to increase about 26% from Year 2000 levels, placing increased pressure on the existing transportation network to adequately serve this demand. The OCTAM forecasts prepared for this study project a 47% increase in vehicle hours traveled and a 107% increase in vehicle hours of delay from 2000 to 2030. This increase in travel times suggests that residents and commuters will face substantial increases in congestion and delay on freeways and streets crossing the OC/LA county line.

Several individual transportation corridors and facilities have been identified as future hot spots or areas in need of improvement in order to address the forecasted increases in travel demand and travel delay. Hot spots are defined as freeway and street segments that are forecast to operate at a level of service (LOS) "F" in the year 2030 condition, based on the OCTAM travel demand forecasts. The hot spots across the OC/LA county line are as follows:

- SR-57 Freeway (Lambert Road to Diamond Bar Boulevard) – Volume to capacity (v/c) ratios for the freeway approach 1.60 in the AM Peak period and 1.45 in the PM peak period based on future travel demand. The forecasts are 160% and 145% of the available capacity of the freeway during these time periods, respectively.
- Brea Canyon Road (Tonner Canyon Road to Diamond Bar Boulevard) – V/c ratios for this roadway segment based on travel demand exceed 3.00 in the southbound direction in the AM Peak and in the northbound direction in the PM Peak. This volume of traffic could not be realistically served by the roadway, resulting in a complete saturation of the roadway and breakdown in operations. Combined with the forecast increases in congestion on the SR-57 freeway, these two corridors would not be capable of serving the forecast travel demand between the San Gabriel Valley and North Orange County in 2030.
- Harbor Boulevard (north of Whittier Boulevard) – This roadway is forecast to experience increased congestion in the Year 2030 and would operate at LOS F in the peak direction during the AM and PM peak periods.

- La Mirada Boulevard (Rosecrans Avenue to Alondra Boulevard) – This segment of La Mirada Boulevard is forecast to experience increased congestion in the Year 2030 and would operate at LOS F in the peak direction during the AM and PM peak periods.
- Imperial Highway (East of Beach Boulevard) – This segment of Imperial Highway is forecast to experience increased congestion in the Year 2030 and would operate at LOS F in the peak direction during the AM and PM peak periods.
- SR-91 Freeway (Artesia Boulevard to Knott Avenue) – All studied segments of the SR-91 freeway are forecast to operate at LOS E or F in both directions during both the AM and PM peak periods. Travel demand is bi-directional in this corridor.
- I-5 Freeway (Beach Boulevard to Alondra Boulevard) – Travel demand on the I-5 is also bi-directional, with all studied freeway segments forecast to operate at LOS E or F in both directions during both the Am and PM peak periods, even with the planned improvements included in the 2030 Baseline.
- Katella Avenue/Willow Street (Studebaker Road to Los Alamitos Boulevard) – This corridor is forecast to experience high levels of congestion, particularly near the I-605 freeway. V/C ratios above 1.30 are forecast in the Year 2030 condition for the peak direction.
- Pacific Coast Highway (Seal Beach Boulevard to 7th Street) – Pacific Coast Highway is forecast to experience poor levels of service (LOS E and F) during both the Am and PM peak periods for the segments identified above.
- I-405 Freeway (SR-22 to Woodruff Avenue) – The v/c ratios forecast on the I-405 are the second highest in the study area, exceeded only by the SR-57 freeway. All studied segments of this freeway are forecast to operate at LOS E or LOS F in both the Am and PM peak periods in both directions of travel. LOS F conditions are forecast for both directions of travel during the PM peak period for the full distance between the SR-22 freeway and Woodruff Avenue.
- I-605 Freeway (I-405 to Carson Street) – The I-605 freeway is forecast to experience congestion with LOS E and LOS F in the peak direction between the I-405 freeway and Carson Street.
- Transit services operating between Orange County and Los Angeles County are also in need of improvement. There are limited opportunities for traveling across the county line, even with planned and funded future increases to bus services and Metrolink. Improvements to regional transit services across the OC/LA county line would assist in serving future travel demand and provide residents and commuters with transportation alternatives to avoid the areas of congestion and hot spots identified above.

The Conceptual Alternatives were developed by OCTA and Metro, with input from the study TWG, to address these hot spots and other future transportation challenges identified during the preparation of the Corridor Mobility Problem and Purpose and Need Report. The recommendations for continuing the efforts initiated in the OC/LA Intercounty Transportation Study are presented in the following section.

5.2 PROJECT RECOMMENDATIONS

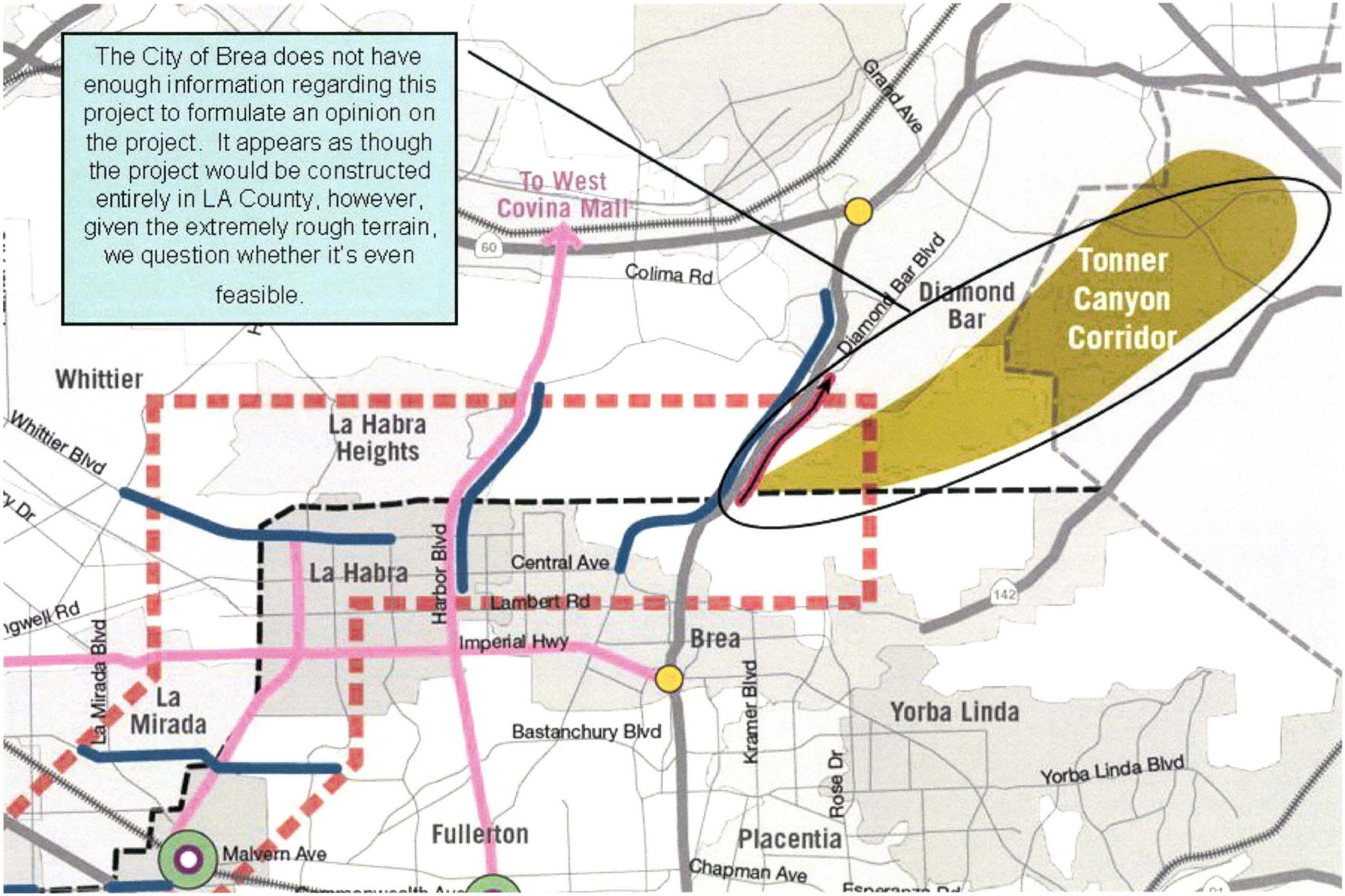
The OC/LA Intercounty Transportation Study has identified the purpose and need for improvements to the transportation network connecting Orange County and Los Angeles County. The initial set of conceptual alternative strategies developed as part of the study and described in this report provides a baseline for OCTA and Metro to follow in the identification and evaluation of projects to address the study purpose and need.

The Conceptual Alternatives outline a series of strategies to improve freeways, arterial streets, and transit services. This is the just the first step in the development of a preferred set of projects and improvements for intercounty transportation. The next step in the development of the Conceptual Alternatives is a detailed study to quantify the performance, impacts, benefits, and costs of each of the proposed projects. It is recommended that this detailed study include at a minimum the following elements:

- The development of transportation modeling forecasts for each project to assess the performance of each project in serving anticipated increases in travel demand;
- The preparation of preliminary cost estimates for each project;
- A preliminary environmental evaluation to examine the impacts of the projects on biological and cultural resources, adjacent land uses, etc.; and
- Screening and evaluation of the projects with the objective of identifying a Locally Preferred Strategy (LPS). The LPS would include a set of proposed projects that were determined to provide the highest level of benefit and improvement to the transportation network based on the evaluation criteria established for the study.

The OC/LA Intercounty Transportation Study has fulfilled one of its primary objectives to assist in increasing the coordination between OCTA and Metro. This successful start should be continued with the objective of building an ongoing relationship to address transportation issues and needs between Orange County and Los Angeles County. The continuation of the OC/LA Intercounty Transportation Study with a detailed evaluation of the Conceptual Alternatives is recommended to further the development and strengthening of this relationship.

APPENDIX


The City of Brea does not have enough information regarding this project to formulate an opinion on the project. It appears as though the project would be constructed entirely in LA County, however, given the extremely rough terrain, we question whether it's even feasible.
To West Covina Mall
Grand Ave
Colima Rd
Diamond Bar Blvd
Diamond Bar
Tonner Canyon Corridor
Whittier
Whittier Blvd
La Habra Heights
La Habra
Harbor Blvd
Central Ave
Lambert Rd
Imperial Hwy
Brea
La Mirada Blvd
La Mirada
Bastanchury Blvd
Kramer Blvd
Yorba Linda
Yorba Linda Blvd
Rose Dr
Fullerton
Placentia
Chapman Ave
Malvern Ave
60
142

-----Original Message-----
From: David Liu [mailto:David.Liu@ci.diamond-bar.ca.us]
Sent: Monday, March 31, 2008 6:05 PM
To: Wendy Garcia
Cc: Rick Yee
Subject: OC/LA Intercounty Transportation Study Comments

Wendy,

The following is the City of Diamond Bar's comments regarding the conceptual transportation improvements (February 21, 2008) identified in the Orange/Los Angeles Intercounty Transportation Study.

Arterial/Rapid Bus Concept

The arterial/rapid bus concept from the OC/LA Intercounty Transportation Study identifies the widening of Brea Canyon Road between Central Avenue and Pathfinder Road to include one general purpose lane in each direction. The City understands the rationale of proposing the widening on Brea Canyon Road from technical point of view, however, the City requests to maintain Brea Canyon Road between SR-57 ramps to Pathfinder Road as its current two-lane configuration, for the following reasons:

1. Brea Canyon Road in the City's jurisdiction is designated as an arterial street that serves the residential subdivisions and supporting community services (i.e., parks, neighborhood retail stores, etc.) mainly located on the east side of this roadway. However, this segment of Brea Canyon Road is currently used as the bypass of the parallel SR-57 traffic during the peak periods, due to the traffic congestion on SR-57. The cut-through regional traffic on Brea Canyon Road has already adversely affected the neighborhood by worsening traffic congestion, noise, and safety. The widening of Brea Canyon Road would cause this roadway to undertake more bypass traffic, which would exacerbate the impacts.

2. OCTA has approved funding to add an additional lane on northbound SR-57 from Orangewood Avenue to Lambert Road, and a northbound truck climbing lane from Lambert Road to one kilometer beyond the Orange/Los Angeles County Line. The City is expecting the possibility of extending the lane in connection with private development. In addition, the Intercounty Transportation Study also proposes to add one lane on southbound SR-57 from Pathfinder Road to I-5. The improvements on SR-57 would likely reduce the bypass traffic on Brea Canyon Road, so that the two-lane capacity on this roadway would still be adequate to accommodate future traffic demand.

Public/Private Concept

The public/private concept from the OC/LA Intercounty Transportation Study identifies adding truck toll lanes on I-710 from Ocean Avenue to SR-60. The City has concerns that the truck toll lanes on I-710 with one end at SR-60 could mislead the public for the requirement of truck lanes on SR-60 to accommodate east-west truck traffic to and from I-710. The City opposes truck lanes on SR-60 based on local concerns of negative environmental and community impacts. The City has requested that both SCAG and Metro modify their plans to best address Diamond Bar's concerns (that very well could become regional concerns). Therefore, the City requests the Intercounty Transportation Study to consider other north terminuses for the truck toll lanes on I-710.

Thank you for the opportunity to provide these comments to you. Should you have any questions, please feel free to contact me.

David G. Liu, P.E.
Director of Public Works/City Engineer
City of Diamond Bar
909-839-7040

INTEROFFICE MEMORANDUM

TO: Jeffrey S. Sinn, City Engineer DATE: February 27, 2008

FROM: Nelson Wong, Traffic Manager

SUBJECT: OC/LA Intercounty Transportation Study Draft Conceptual Alternatives. (Planning)

We have reviewed the OC/LA Intercounty Transportation Study Draft Conceptual Alternative Maps dated February 21, 2008. We have the following comments:

1. 2030 Baseline Map

   - Delete the planned project on Lambert Road.

2. TSM/TDM Concept Map

   - The City will not support any arterial corridor improvements on Harbor Boulevard north of Whittier Boulevard.

3. Arterial/Rapid Bus Concept Map

   - The City will not support the addition of one lane in each direction on Harbor Boulevard north of Whittier Boulevard.

   - The City will not support rapid transit on Harbor Boulevard north of Whittier Boulevard.

   - The addition of one lane in each direction on Whittier Boulevard should terminate at Beach Boulevard.

4. Freeway Concept Map

   - The conversion of Imperial Highway from a Smart Street to a Parkway concept seems unlikely.

5. Transit Concept Map

   - This concept plan doesn't indicate the rapid bus on Harbor Boulevard that is shown on the Arterial/Rapid Bus Concept plan. Furthermore, see above comment.

6. Public/Private Concept Map

   - We have no comment.

Orange and Los Angeles Intercounty Transportation Study

Comments from Gateway Cities Council of Governments
February, 2008

The following comments are for the exhibits that were reviewed at the last TWG meeting (including comments made at the meeting):

- 2030 Baseline Exhibit – No comments
- TSM/TDM Concept – Add a bullet for goods movement ITS programs (the GCCOG is developing such a plan). Add more LA County proposed or existing signal synchronization projects (e.g., Telegraph Rd. and Imperial Highway). Also, would recommend a few more north/south signal synchronization arterial highways.
- Arterial/Rapid Bus Concept – GCCOG will be recommending HOV connectors at the 91/605 interchange and the 605/60 interchange and probably should be listed in this exhibit.
- Freeway Concept – SR-91 improvements should be extended all the way to I-710
- Transit Concept – Not sure where to add this but should probably show (or list) adding additional BNSF 3rd track in this exhibit (if that is not done will affect Metrolink service).
- Public/Private Concept – As indicated at the TWG meeting, the GCCOG cities have taken the position that there will be no truck lanes on the SR-91/I-605/I-405/I-105 freeways or I-710 north of I-5. The concept that is evolving for GCCOG is a system of toll lanes for proposed improvements to the freeways that would link up all the freeways in Southeast Los Angeles County (understand that this is being integrated into the report).

DEPARTMENT OF THE NAVY
NAVAL WEAPONS STATION SEAL BEACH
800 SEAL BEACH BOULEVARD
SEAL BEACH, CA 90740-5000

IN REPLY REFER TO:
5740
Ser N00W/0050
May 22, 2008

Chairman Chris Norby
Orange County Transportation Authority
550 South Main Street
P.O. Box 14184
Orange, CA 92863

Art L Ellen B
Paul T Marissa
File

Re: OC/LA Intercounty Transportation Study

Dear Chairman Norby:

Thank you for the opportunity to respond to your request for comments regarding the OC/LA Intercounty Transportation Study. The Navy appreciates the good working environment that exists between our two organizations.

Specifically, I would like to address the portion of the "Street and Rapid Bus Concept" alternative which includes the widening of Pacific Coast Highway (PCH) from Warner Avenue in Huntington Beach to 7th Street in Long Beach. This portion of PCH includes a section which traverses Navy property, directly adjacent to our wharf munitions loading operations and the Seal Beach National Wildlife Refuge.

My staff has identified several concerns where this proposal could significantly impact our mission. They include:

(1) Explosives Safety - Ensuring the safety of the general public is our highest priority. This is accomplished in part by managing the location and amounts of explosives staged at our wharf during ordnance loading operations. These stringent safety rules are in effect based on the current highway configuration. Widening the highway further into our explosives safety buffer zone would require a Department of Defense re-evaluation of our ordnance operations, and could result in a significant negative impact to the station's mission.

(2) Security - Widening the highway could reduce fence standoff distances to below minimum force protection standards, which would increase our security risk.

(3) Natural Resources - The proposal could result in the removal or alteration of nesting and foraging habitat of several federal and state-listed endangered species, including the California least tern, the light-footed clapper rail and the Belding's savannah sparrow. These and other species would likely

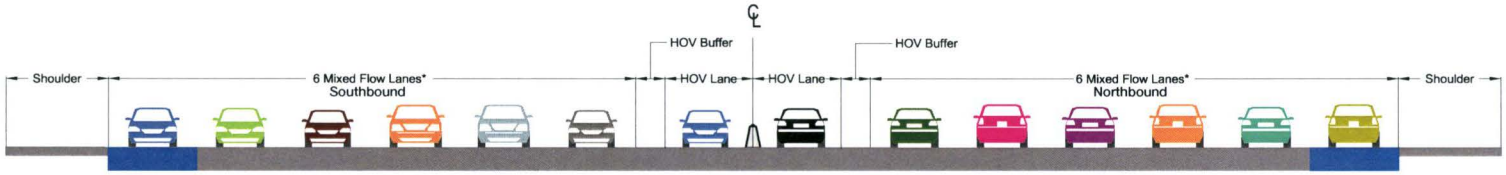
also be disrupted by increased storm water runoff, as well as increased noise, light and air pollution.

On behalf of the U.S. Navy, I request that our concerns be accurately reflected in the study's final report and in any future planning. My staff is available to meet with you to further discuss these issues, and ensure that the needs of both the OCTA and the weapons station are appropriately achieved.

My point of contact is Mr. Gregg Smith, Public Affairs Officer. He can be reached at (562) 626-7215.

Sincerely,

J. D. KURTZ
Captain, U. S. Navy
Commanding Officer



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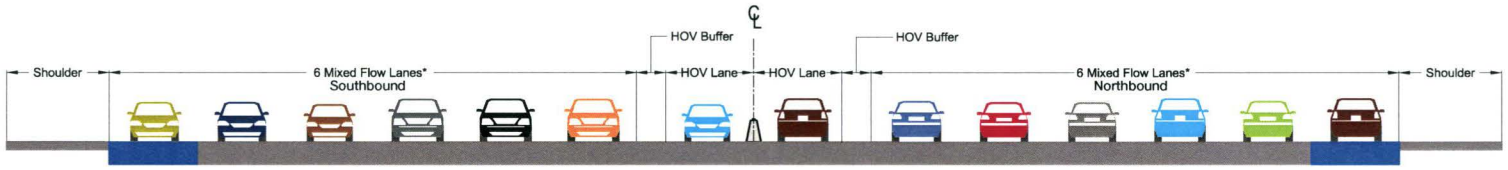

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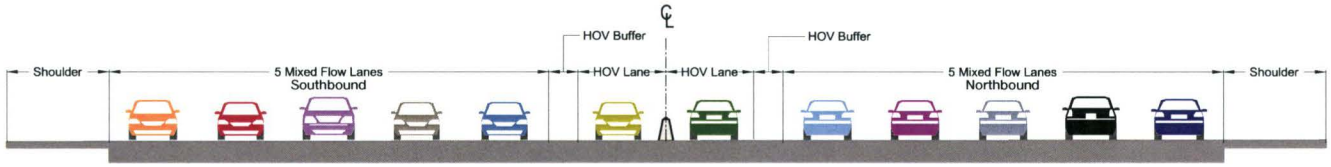


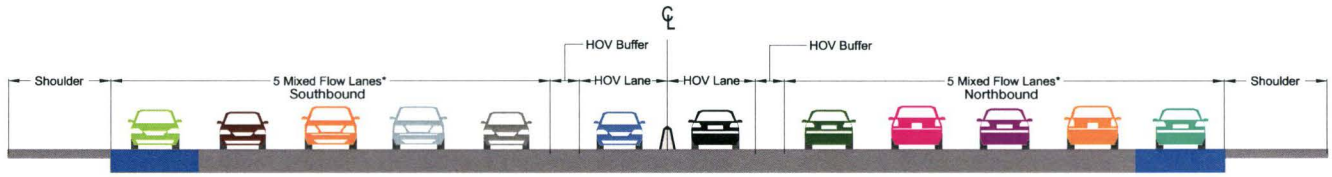
EXISTING YEAR 2008 CONDITION

Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

Baseline improvements include adding 1 general purpose lane in each direction from ?.
There are no proposed improvments in this segment.



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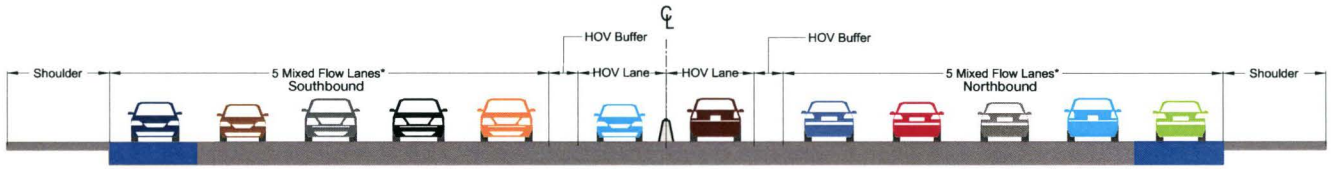

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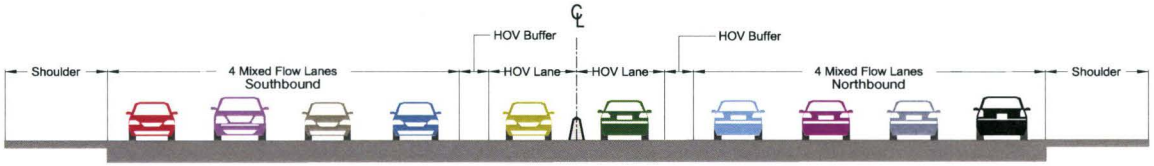

EXISTING YEAR 2008 CONDITION

Legend

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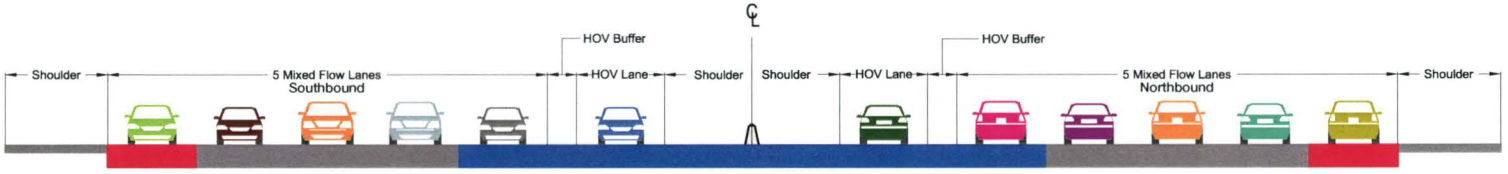
- Existing Year 2008 condition

Notes:

Baseline improvements include adding 1 general purpose lane in each direction from ?.
There are no proposed improvments in this segment.



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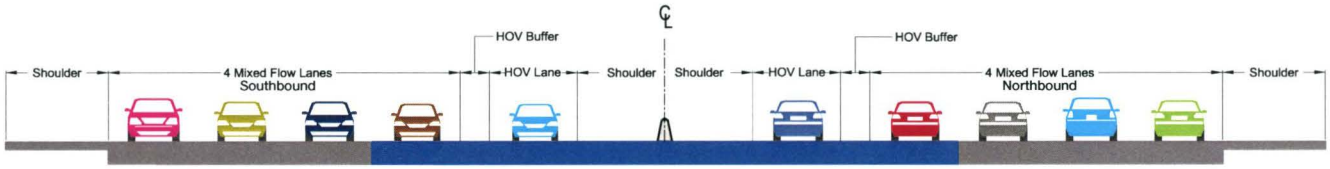

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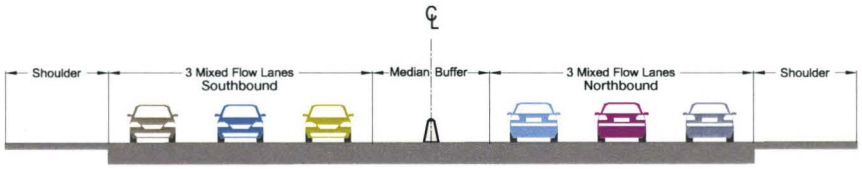


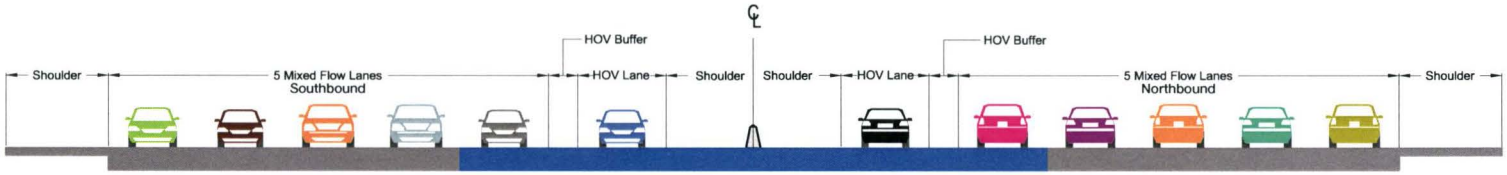
EXISTING YEAR 2008 CONDITION

Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

Baseline improvements include adding 1 general purpose lane and 1 HOV lane in each direction.
Proposed improvements include adding 1 additional general purpose lane in each direction.



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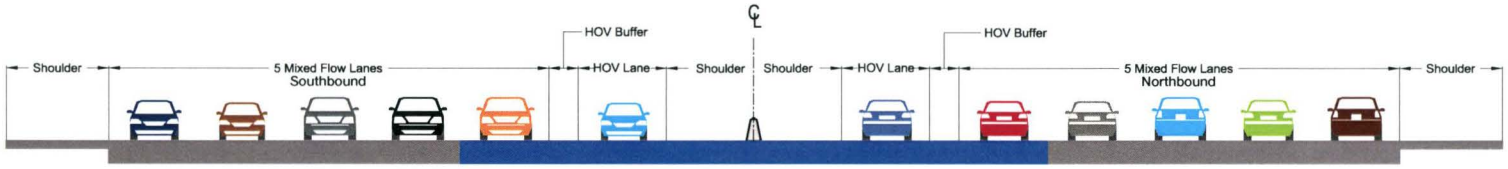

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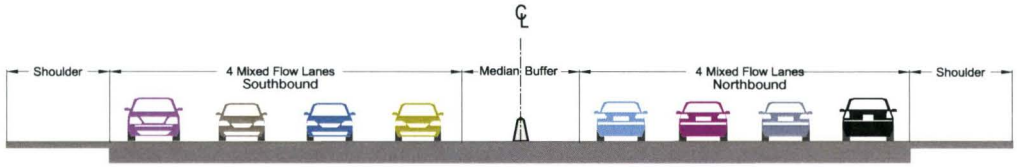

EXISTING YEAR 2008 CONDITION

Legend

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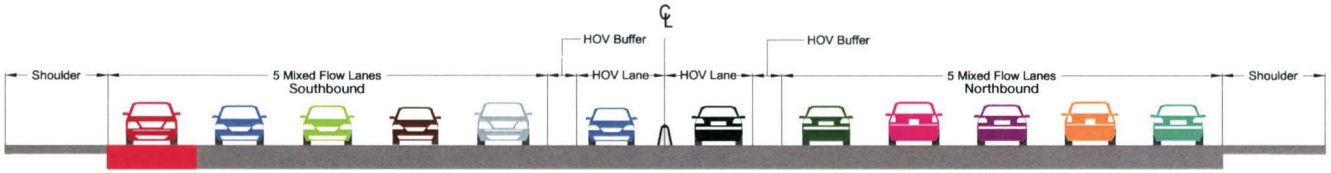
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

Baseline improvements include adding 1 general purpose lane and 1 HOV lane in each direction.



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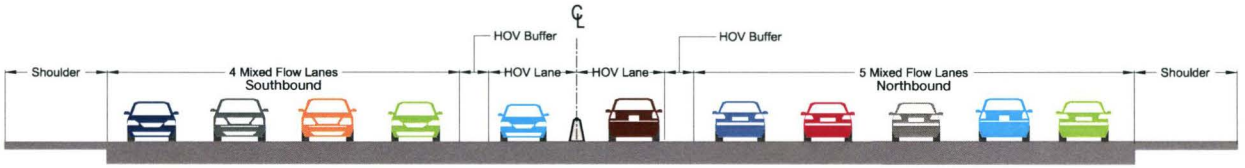

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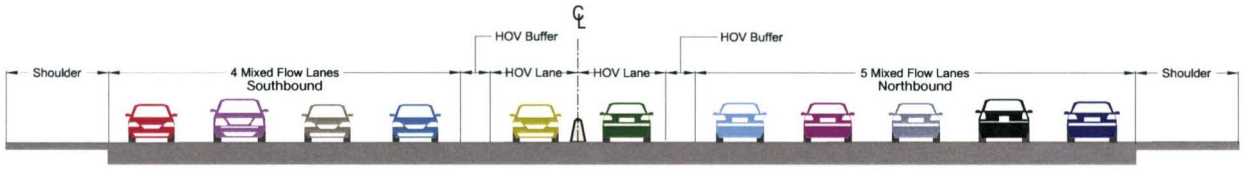


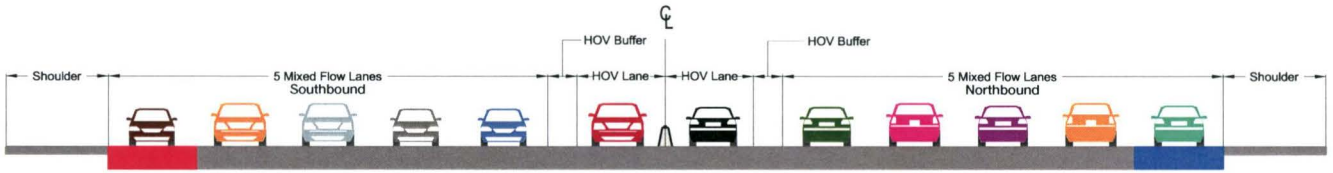
EXISTING YEAR 2008 CONDITION

Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

There are no scheduled Baseline improvements within this segment.
Proposed improvements include adding 1 southern general purpose lane.



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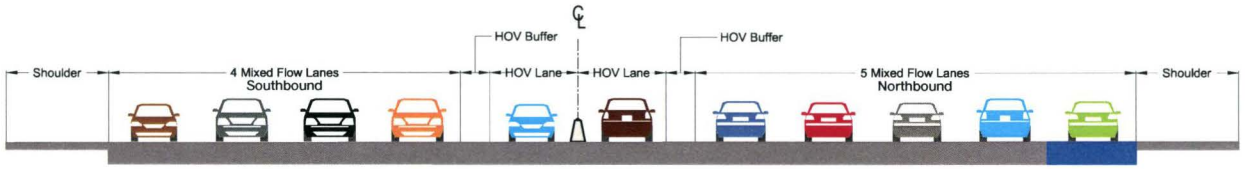

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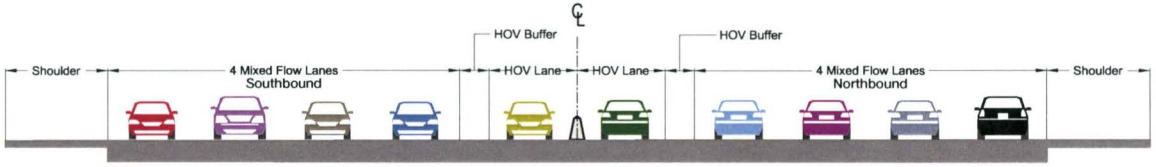

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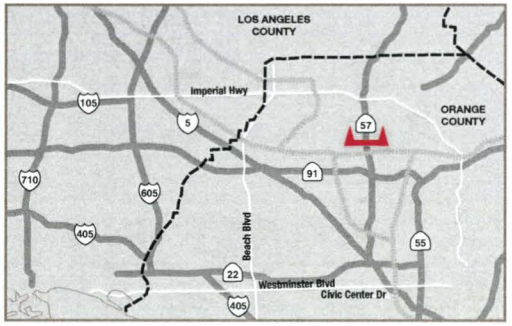

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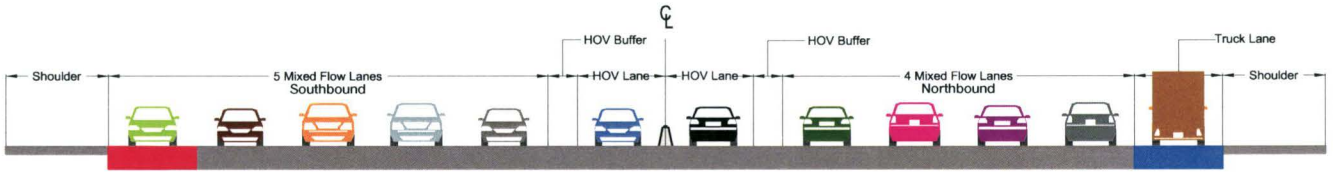
- Existing Year 2008 condition



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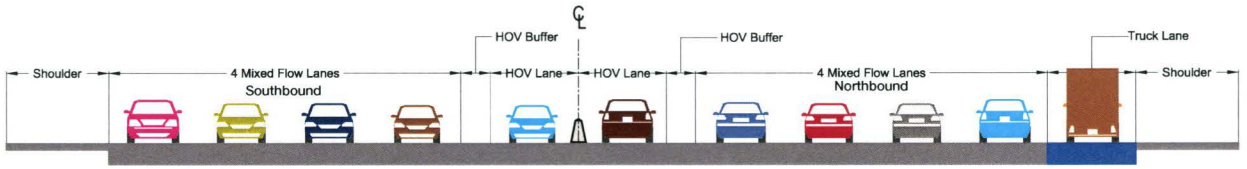

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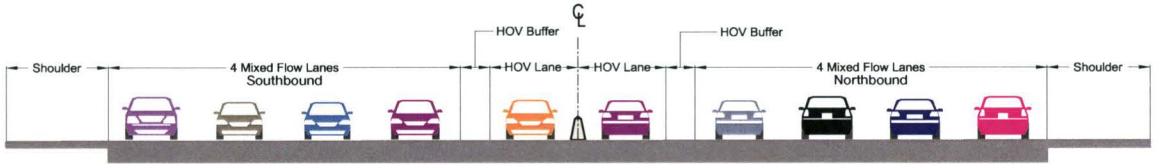
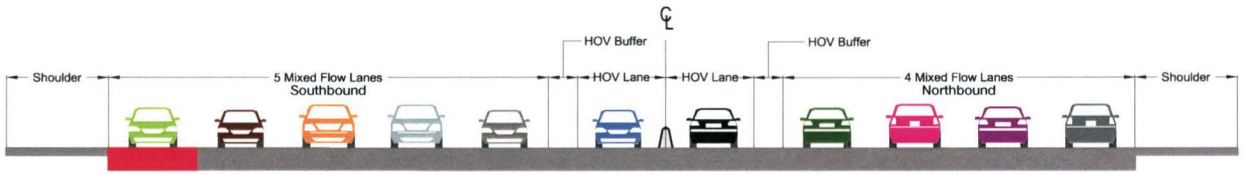


EXISTING YEAR 2008 CONDITION

Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition



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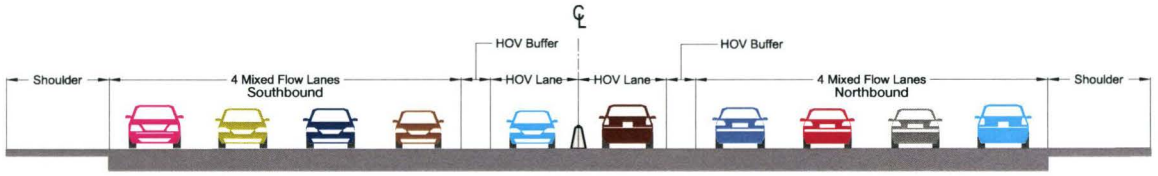

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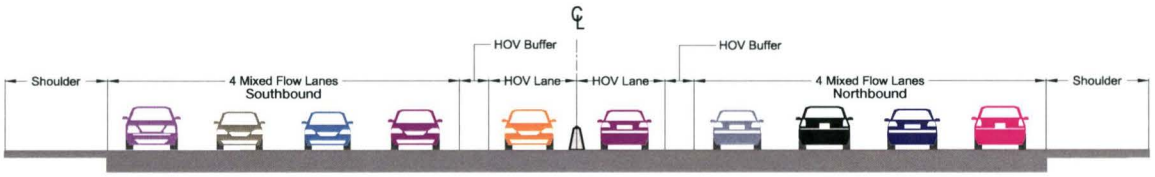


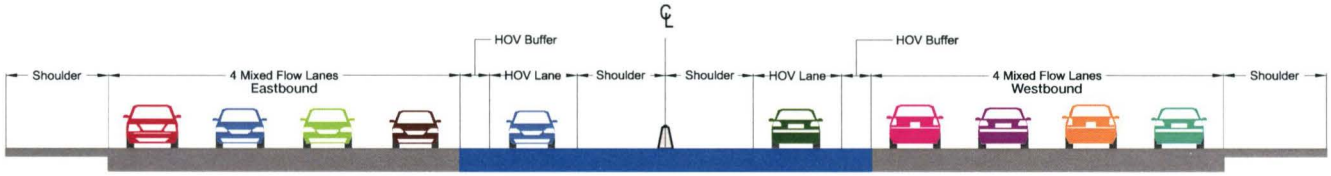
EXISTING YEAR 2008 CONDITION

Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

There are no scheduled Baseline improvements within this segment.
Proposed improvements include adding 1 southern general purpose lane.



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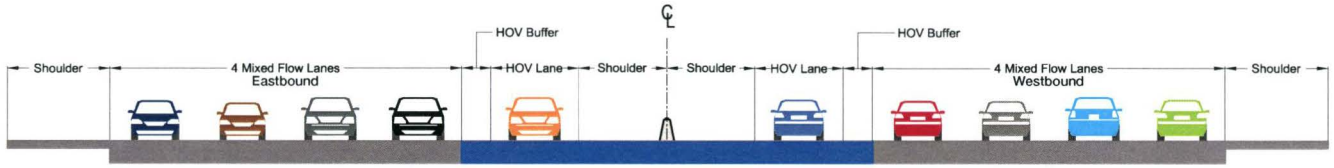
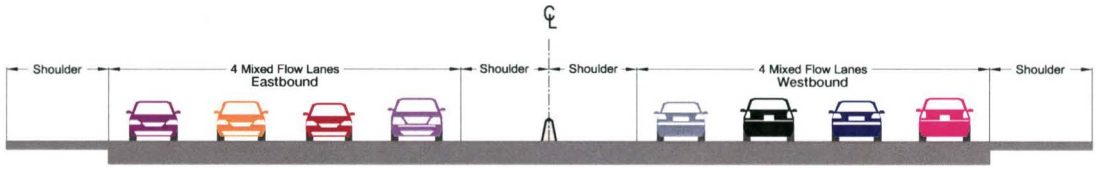
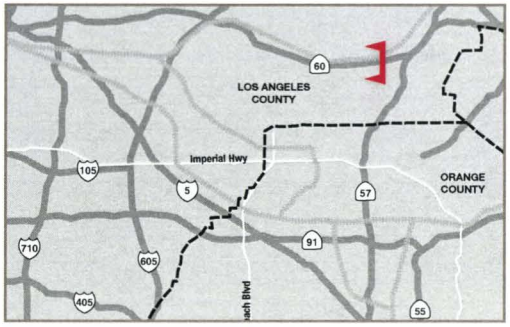


BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

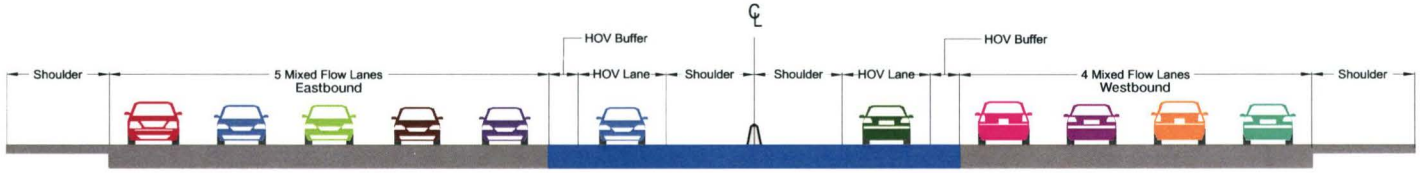


Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

Baseline improvements include adding a second HOV lane in each direction from from I-605 to Brea Canyon Road.



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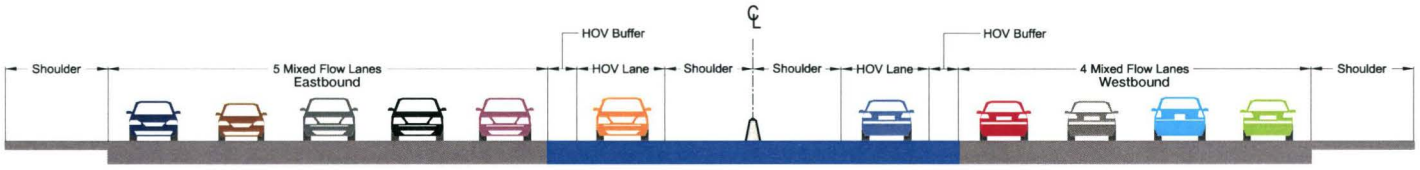
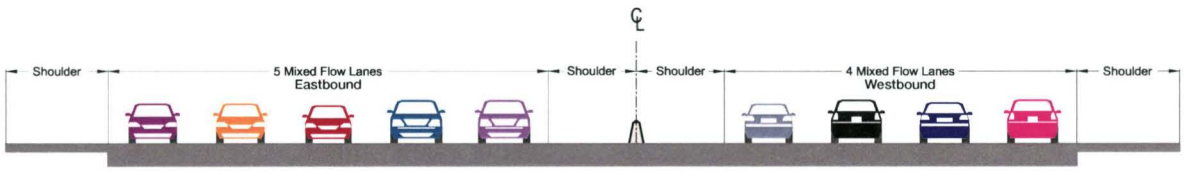


BASELINE YEAR 2030 CONDITION



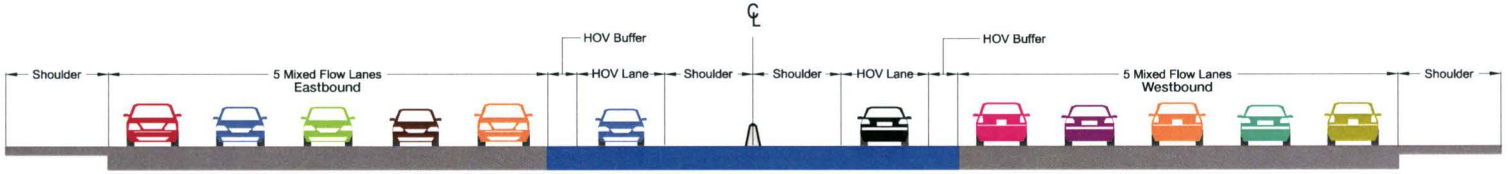
EXISTING YEAR 2008 CONDITION

Legend

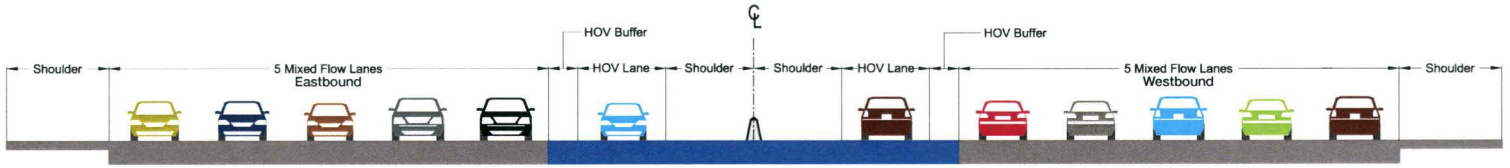
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

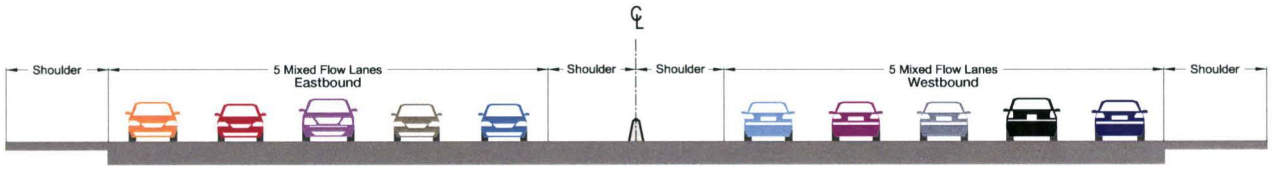
Baseline improvements include adding a second HOV lane in each direction from I-605 to Brea Canyon Road.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



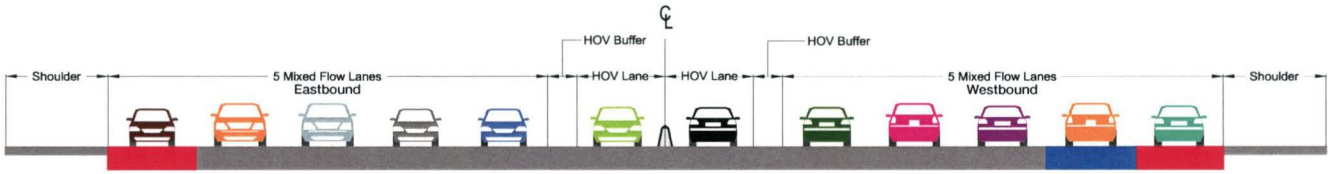
EXISTING YEAR 2008 CONDITION

Legend

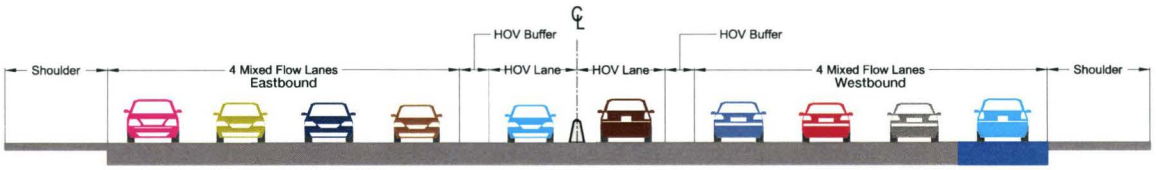
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

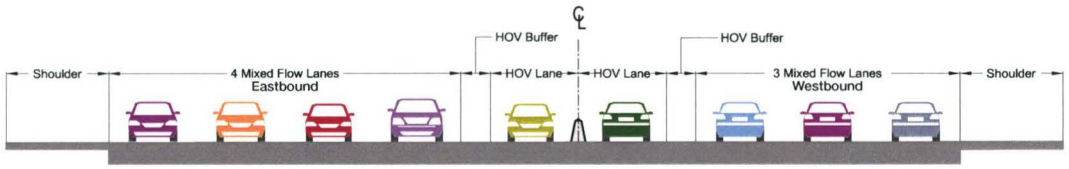
Baseline improvements include adding a second HOV lane in each direction from I-605 to Brea Canyon Road.



PROPOSED YEAR 2030 CONDITION



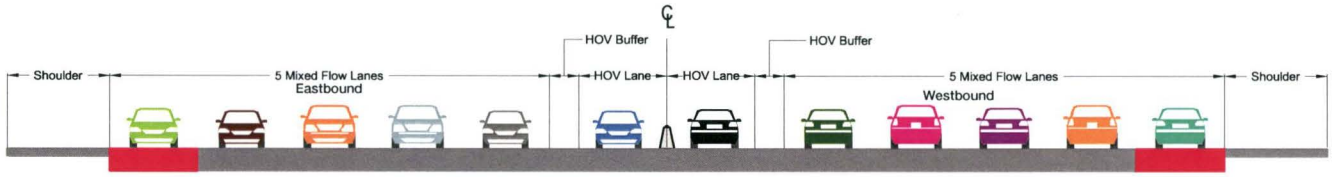
BASELINE YEAR 2030 CONDITION



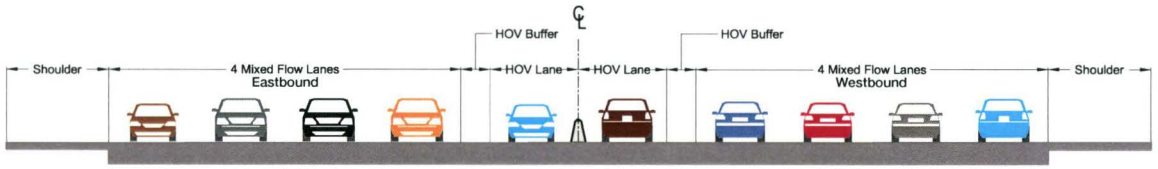
EXISTING YEAR 2008 CONDITION

Legend

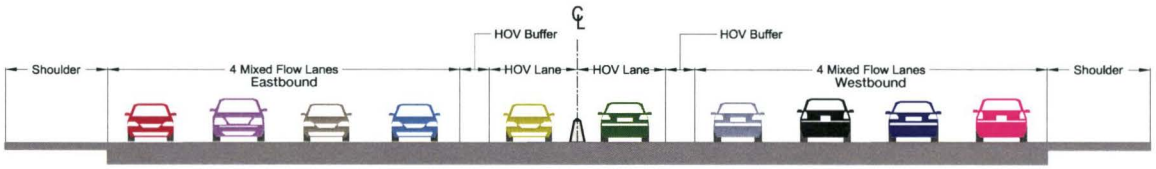
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



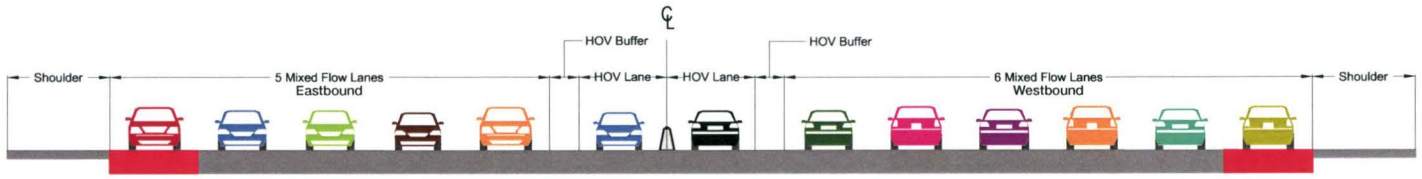
BASELINE YEAR 2030 CONDITION

Legend

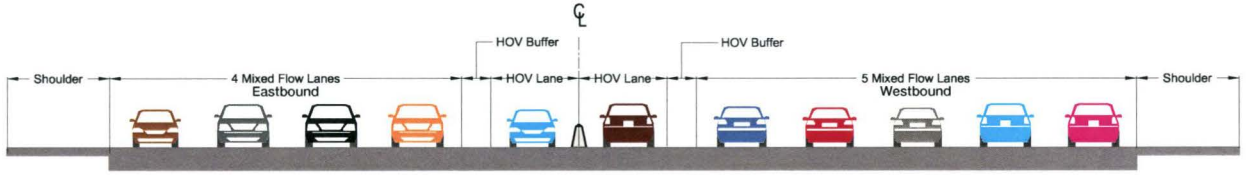
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

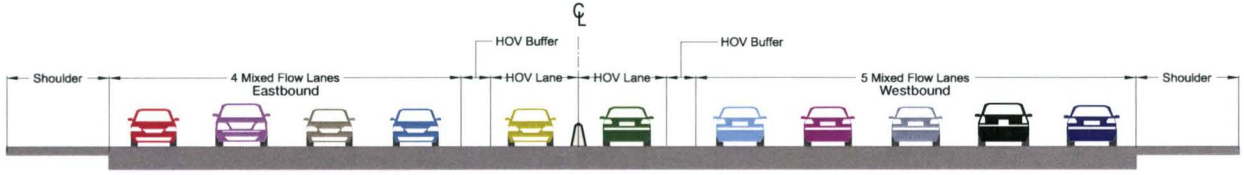
There are no schedule Baseline improvements within this segment.
Proposed improvements include adding 1 general purpose lane in each direction.



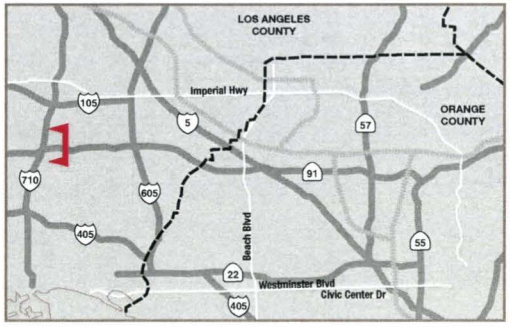
PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

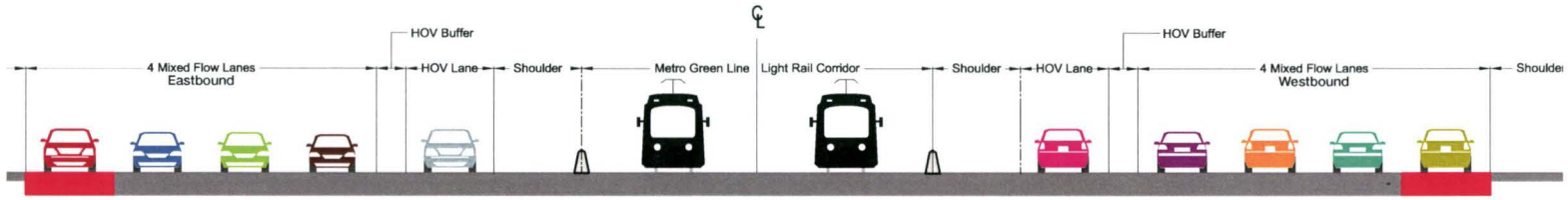


Legend

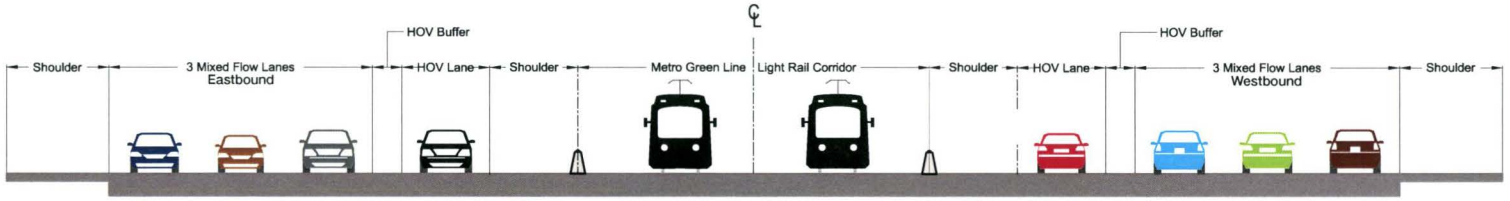
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

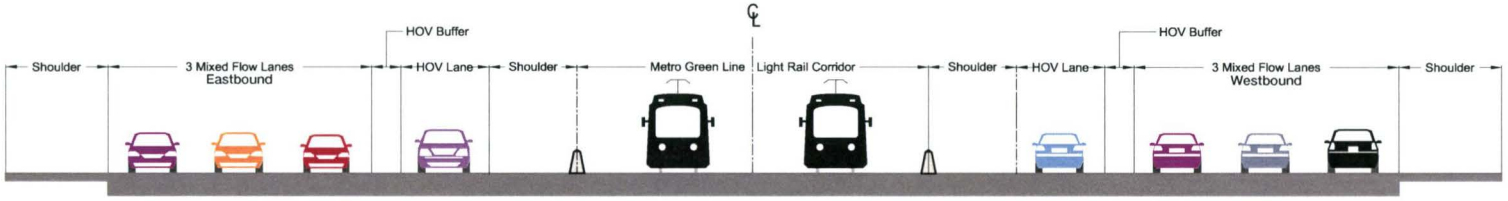
There are no schedule Baseline improvements within this segment.
Proposed improvements include adding 1 general purpose lane in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



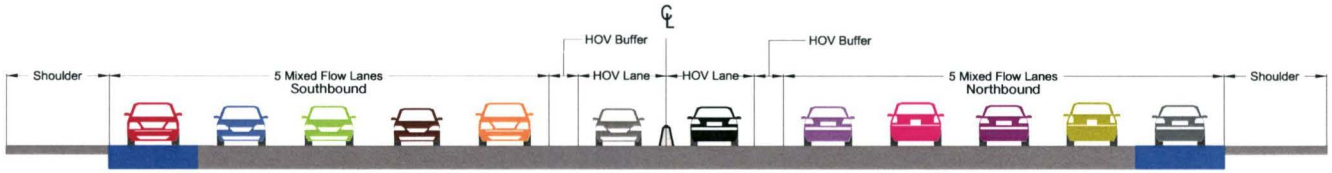
EXISTING YEAR 2008 CONDITION

Legend

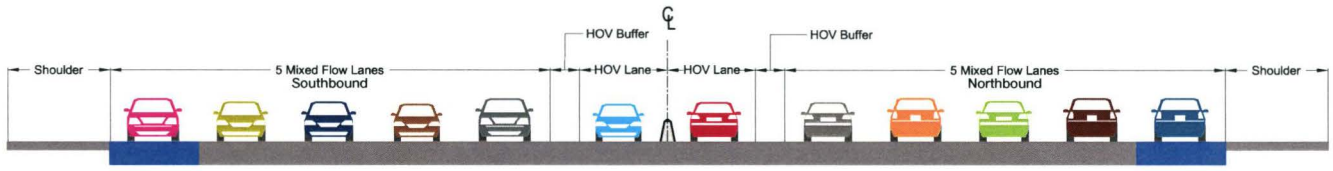
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

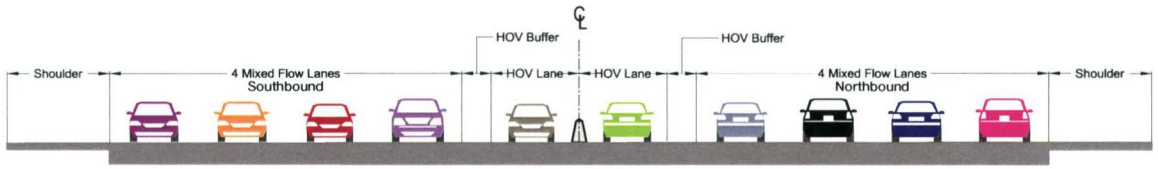
There are no schedule Baseline improvements within this segment.
Proposed improvements include adding 1 general purpose lane in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

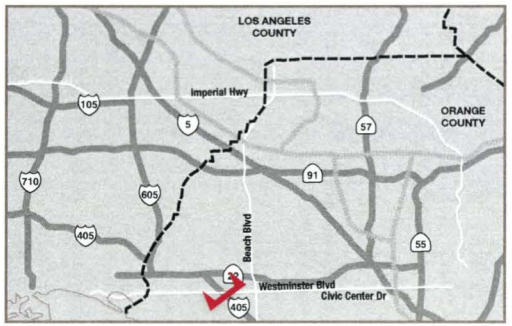
Legend

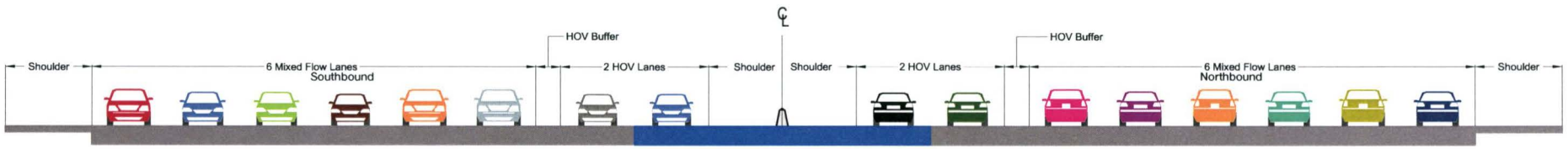
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

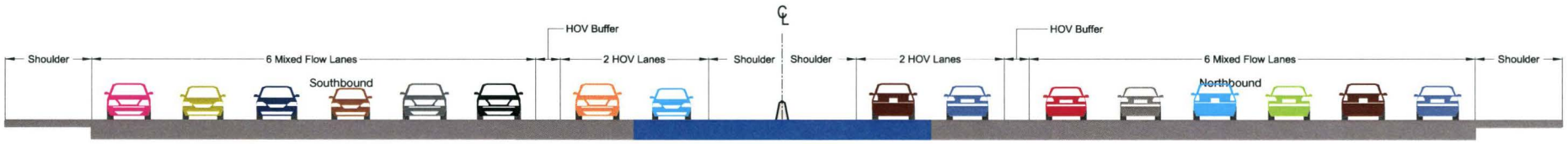
Baseline improvements include adding 1 general purpose lane in each direction from Brookhurst to I-605.

There are no proposed improvments in this segment.

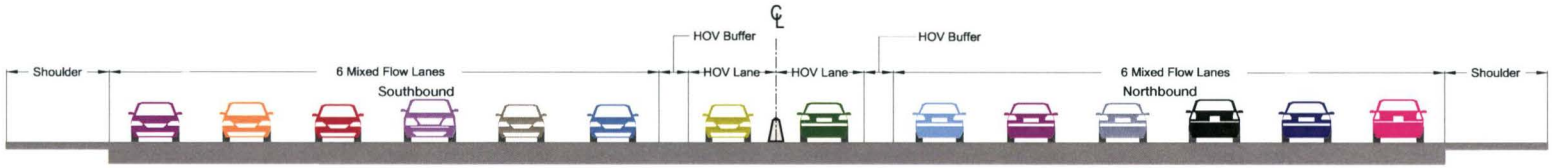




PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



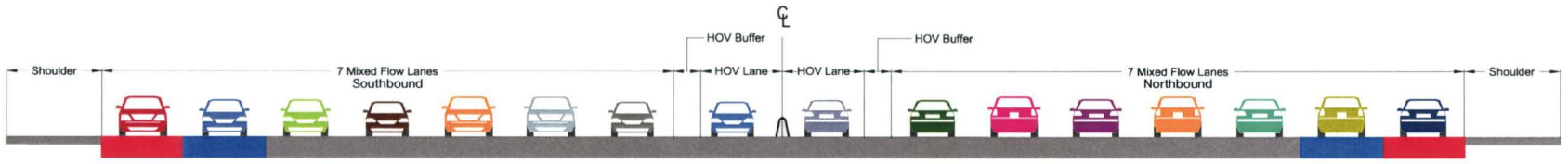
EXISTING YEAR 2008 CONDITION

Legend

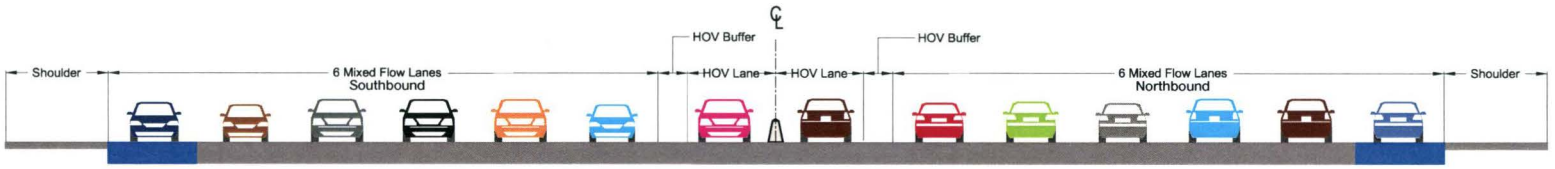
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

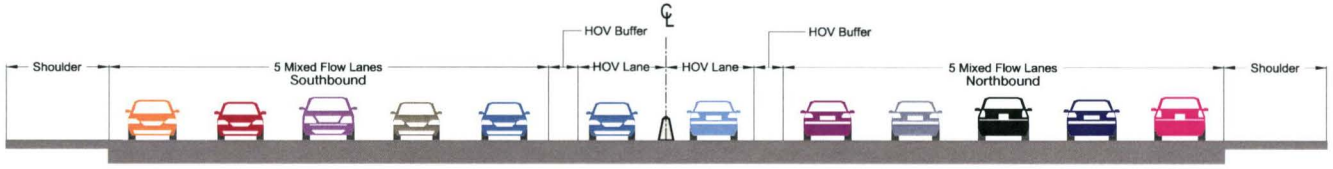
Baseline improvements include adding a second HOV lane in each direction from SR-22 to I-605.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



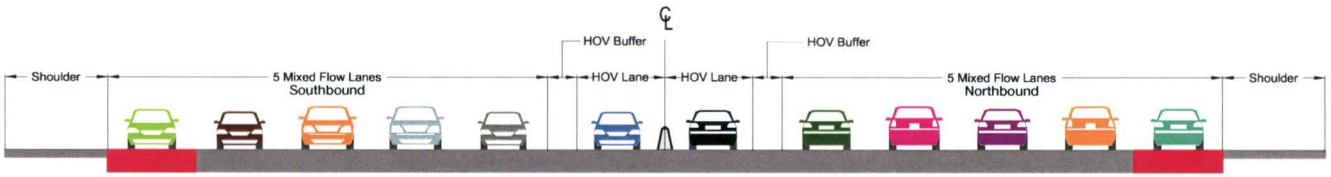
EXISTING YEAR 2008 CONDITION

Legend

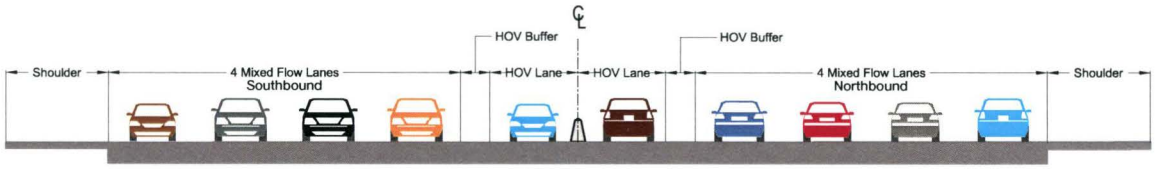
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

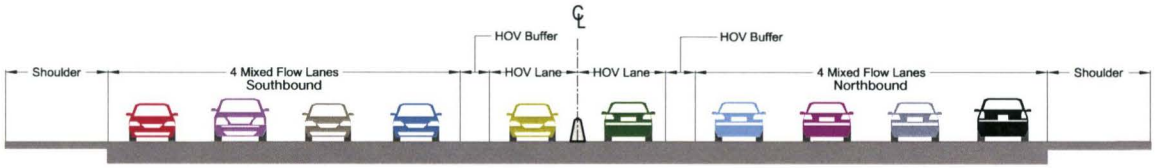
Baseline improvements include adding 1 general purpose lane in each direction.
Proposed improvements include adding 1 additional general purpose lane in each direction.



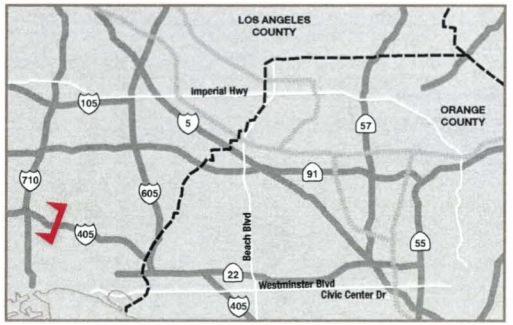
PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

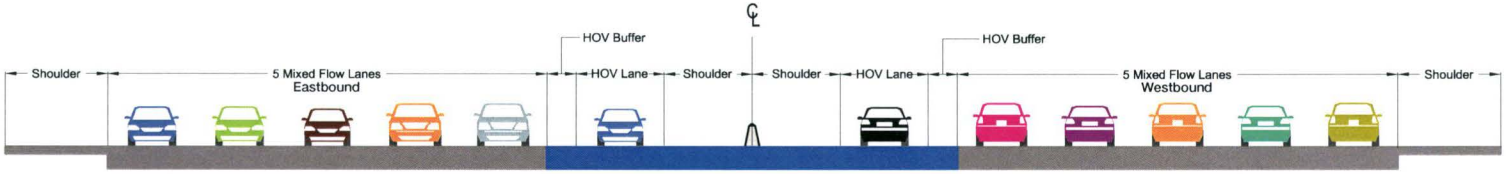


Legend

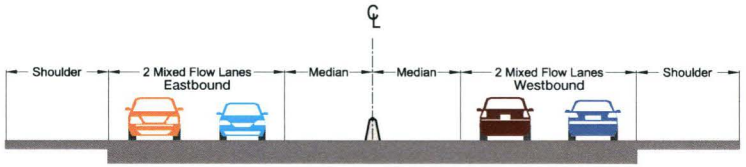
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

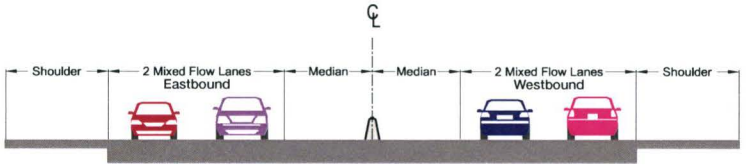
There are no schedule Baseline improvements within this segment.
Proposed improvements include adding 1 general purpose lane in each direction.



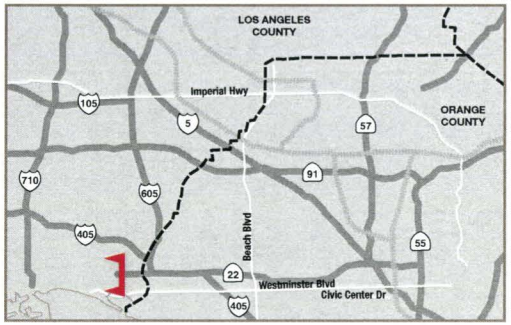
PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

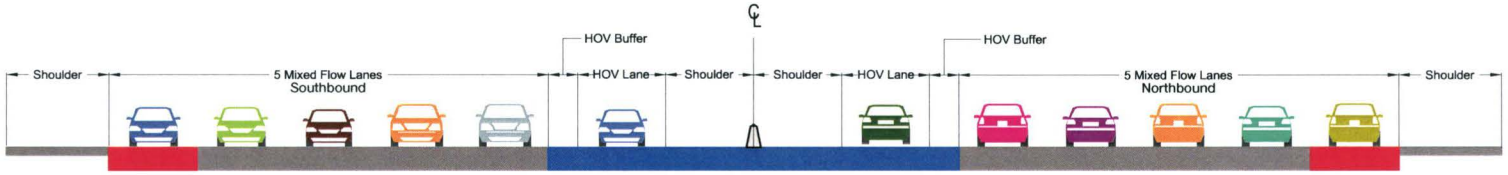


Legend

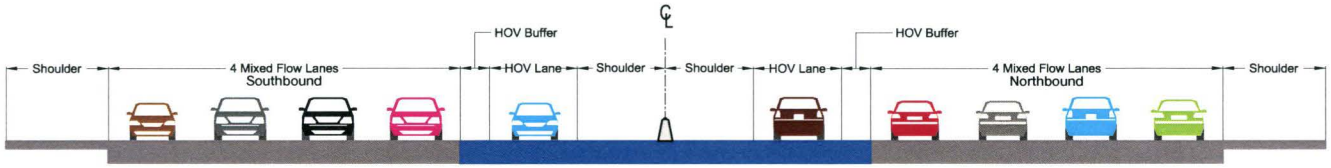
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

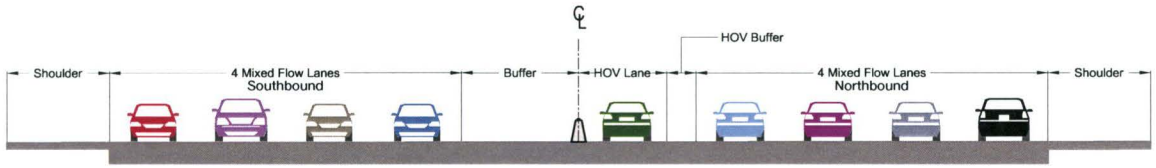
Baseline improvements include adding a second HOV lane in each direction from ?.



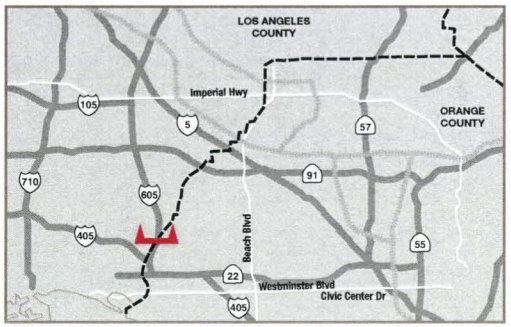
PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION



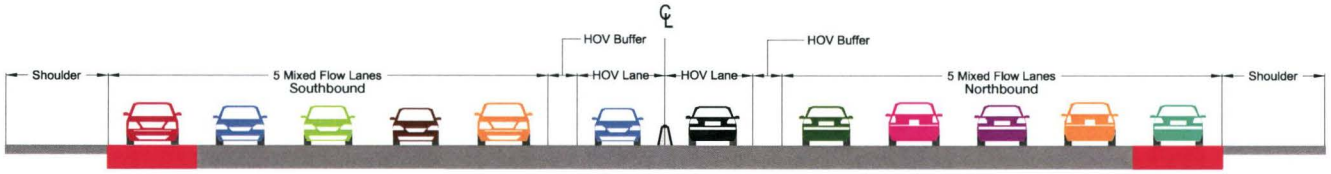
Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

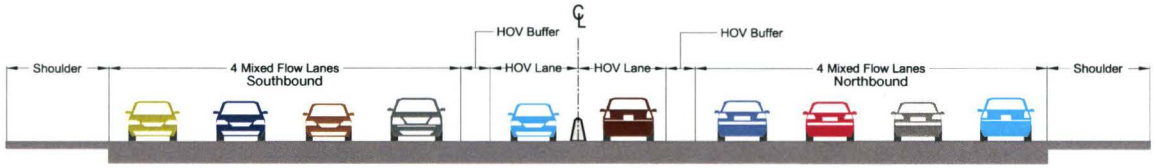
Notes:

Baseline improvements include adding a second HOV lane in each direction from I-405 to Orange County Line.

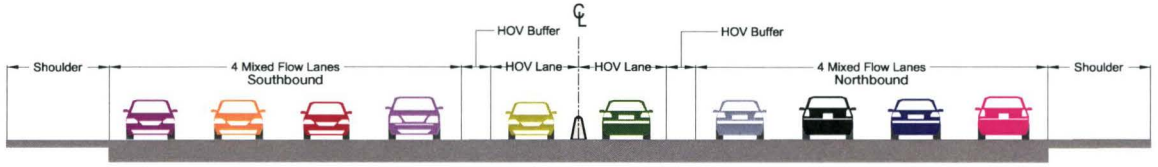
Proposed improvements including adding second HOV lane in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



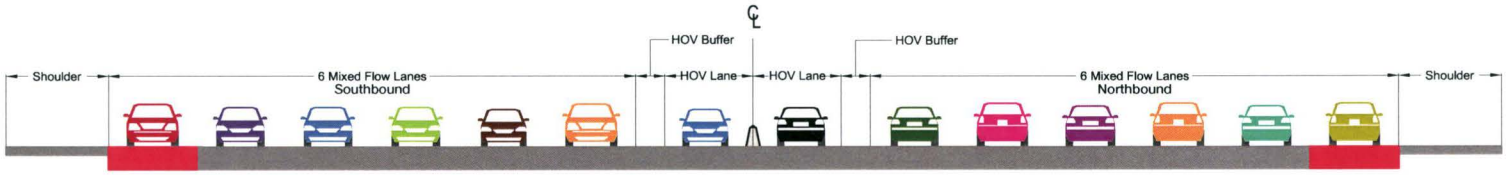
EXISTING YEAR 2008 CONDITION

Legend

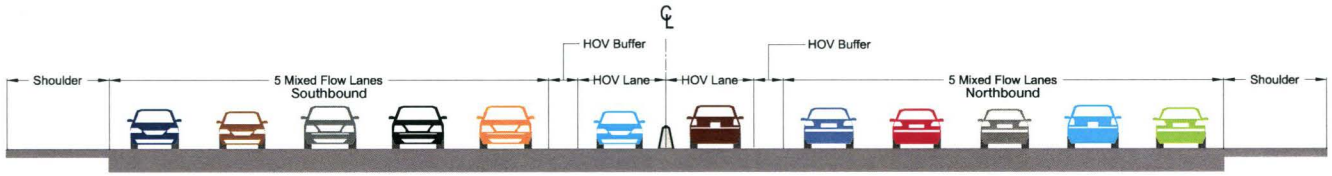
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

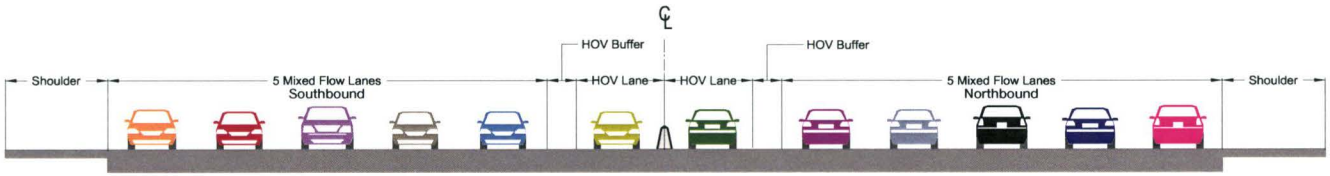
There are no schedule Baseline improvements within this segment.
Proposed improvements include adding 1 general purpose lane in each direction.



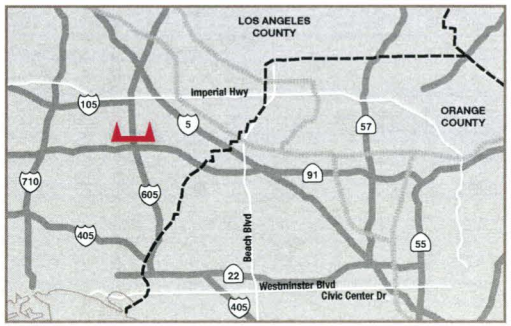
PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

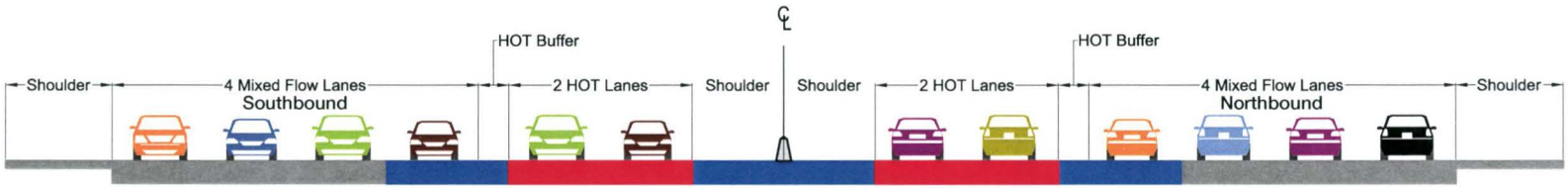


Legend

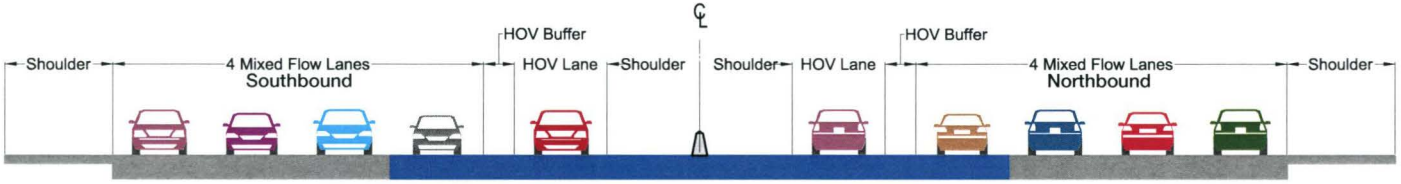
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

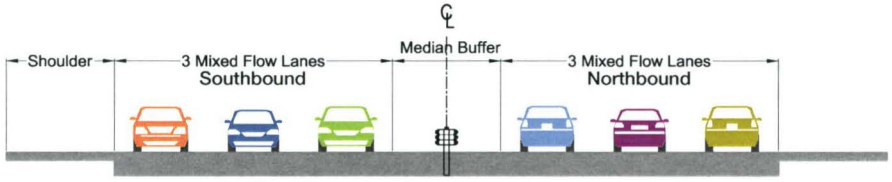
There are no schedule Baseline improvements within this segment.
Proposed improvements include adding 1 general purpose lane in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

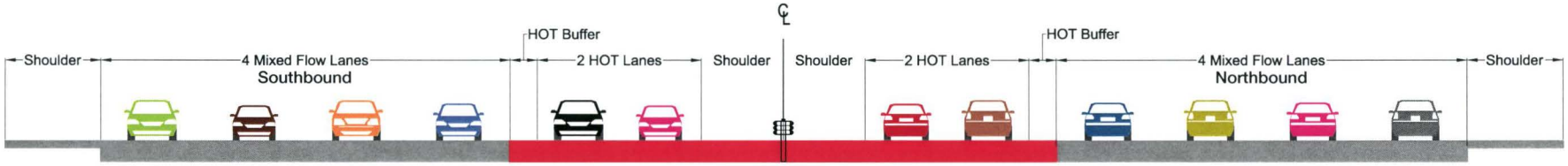
Notes:

Baseline improvements include adding 1 general purpose lane and 1 high occupancy vehicle (HOV) lane in each direction.

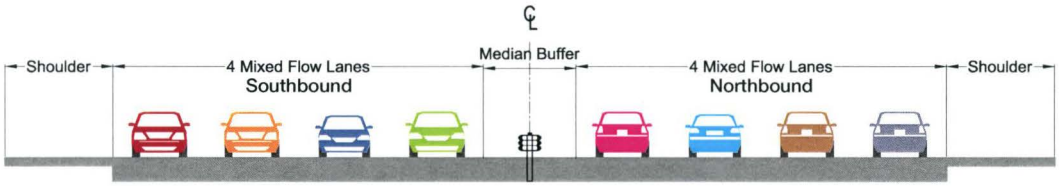
Proposed improvements include converting the high occupancy vehicle (HOV) lanes to dual high occupancy toll (HOT) lanes in each direction.

Public-Private Partnership: High Occupancy Toll (HOT) Lanes

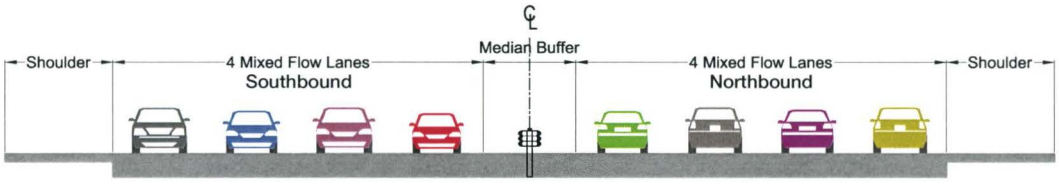
Location: I-5 between I-605 and I-710



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



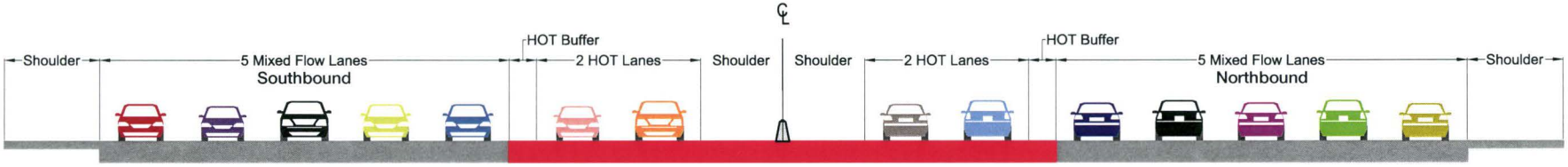
EXISTING YEAR 2008 CONDITION

Legend

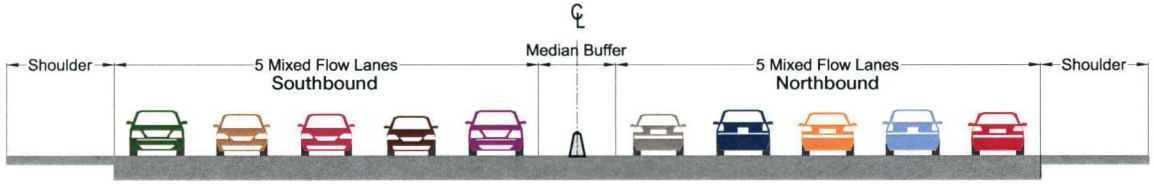
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

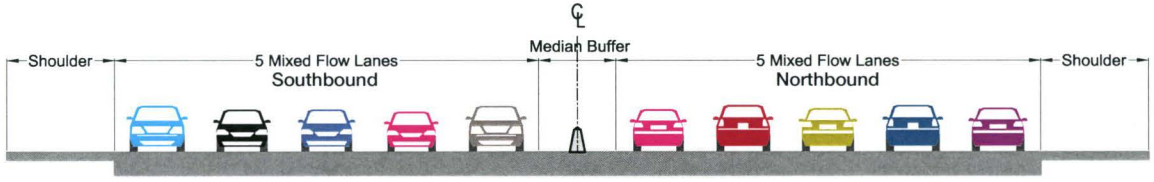
There are no scheduled Baseline improvements within this segment.
Proposed improvements include adding 2 high occupancy toll (HOV) lanes in each direction.



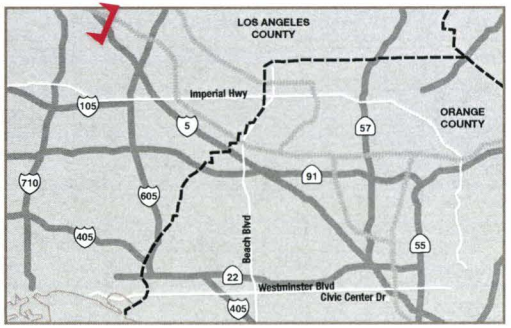
PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

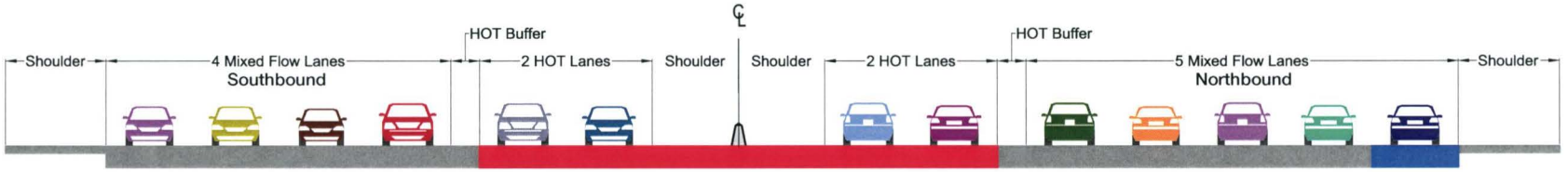


Legend

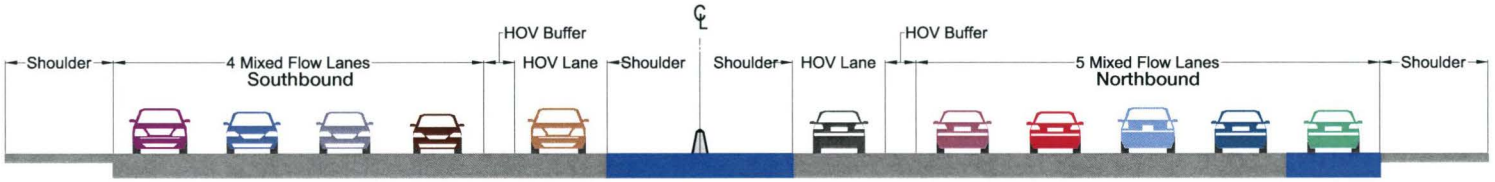
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

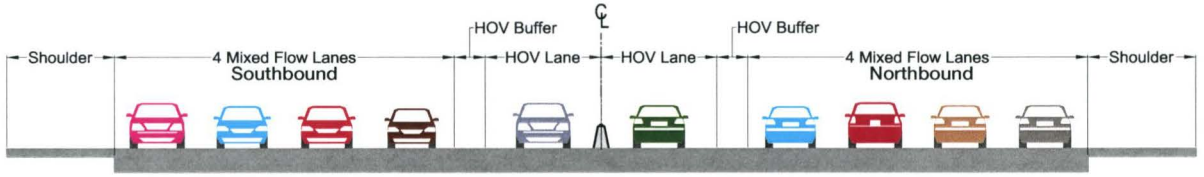
There are no scheduled Baseline improvements within this segment.
Proposed improvements include adding 2 high occupancy toll (HOV) lanes in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

Legend

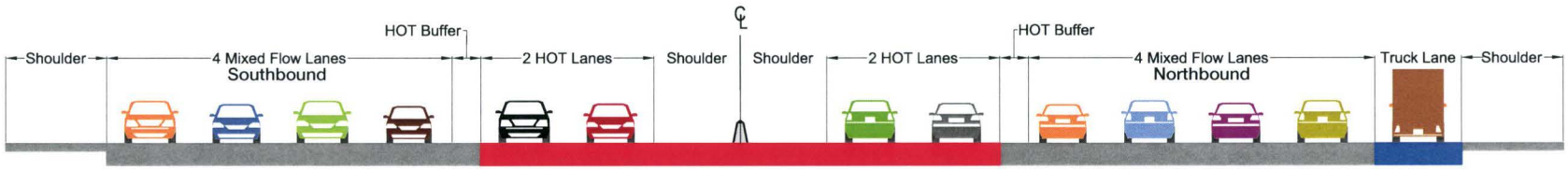
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

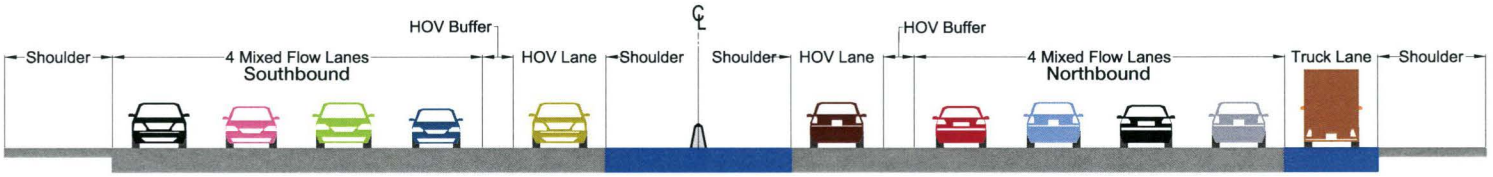
Baseline improvements include an additional northbound SR-57 lane from Orangewood Avenue to Lambert Road and widening general purpose lanes and buffers to standard width.
Proposed improvements include converting the existing high occupancy vehicle (HOV) lanes to dual high occupancy toll (HOT) lanes in each direction.

Public-Private Partnership: High Occupancy Toll (HOT) Lanes

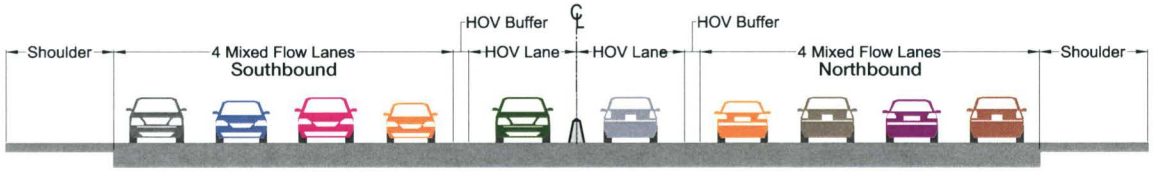
Location: SR-57 between Lambert Road and Tonner Canyon Road



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



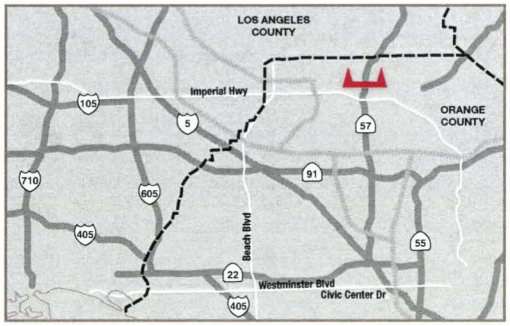
EXISTING YEAR 2008 CONDITION

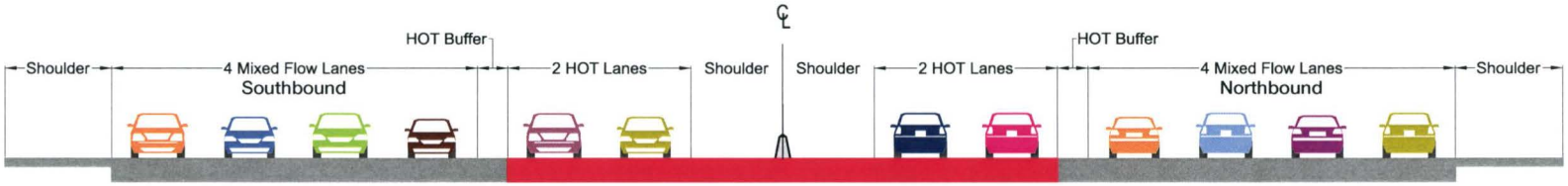
Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

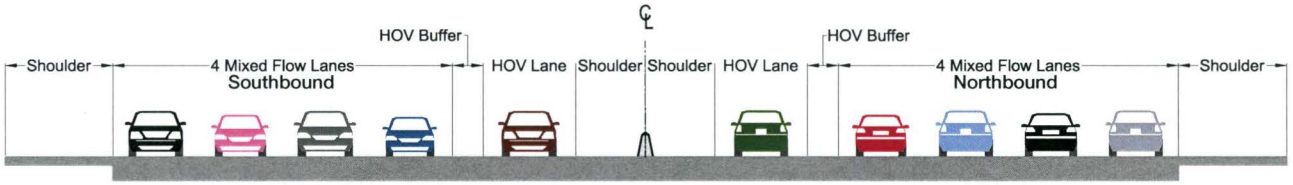
Notes:

Baseline improvements include an additional northbound SR-57 truck climbing lane from Lambert Road to Tonner Canyon Road and widening general purpose lanes and buffers to standard width. Proposed improvements include converting the existing high occupancy vehicle (HOV) lanes to dual high occupancy toll (HOT) lanes in each direction.

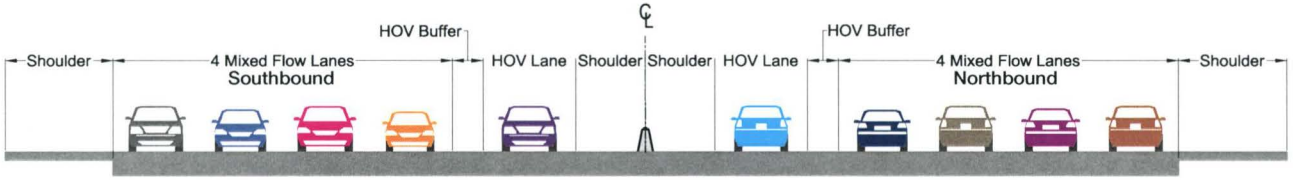




PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



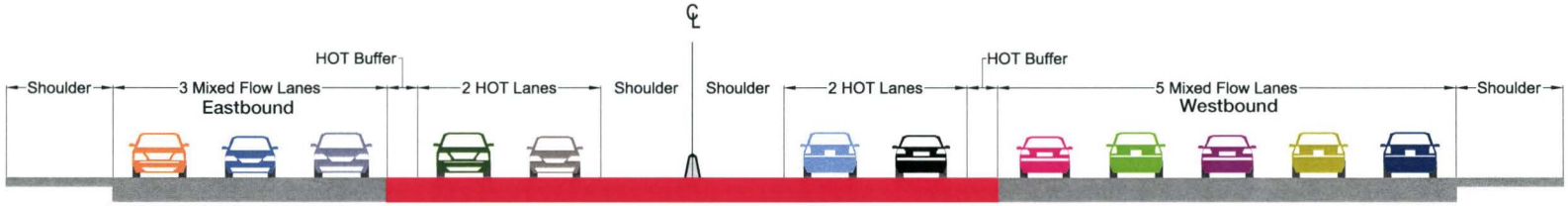
EXISTING YEAR 2008 CONDITION

Legend

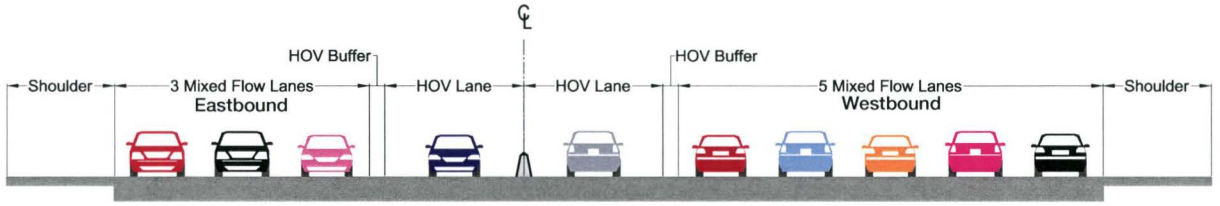
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

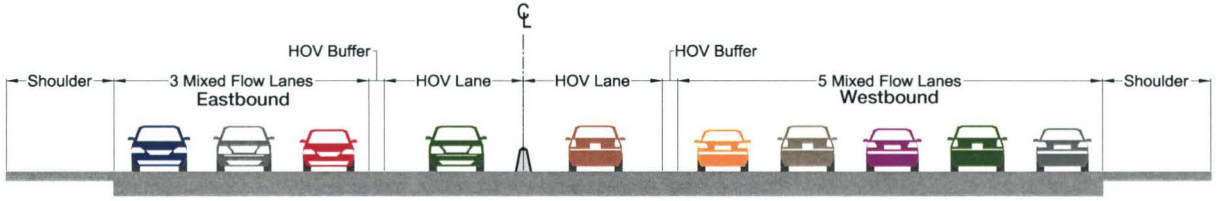
There are no scheduled Baseline improvements within this segment.
Proposed improvements include converting the existing high occupancy vehicle (HOV) lanes to dual high occupancy toll (HOT) lanes in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



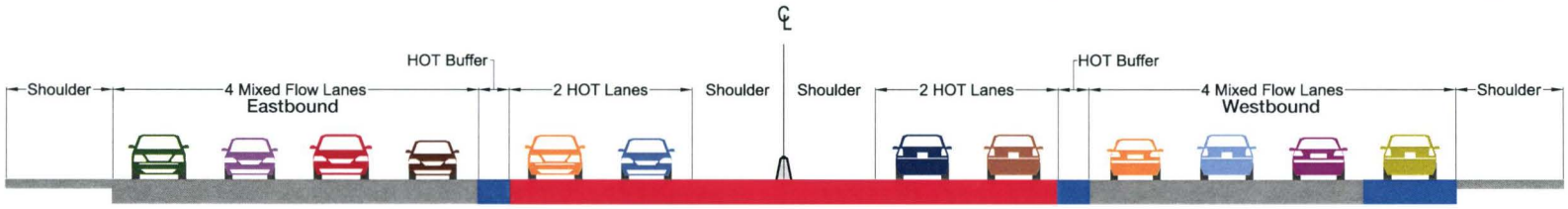
EXISTING YEAR 2008 CONDITION

Legend

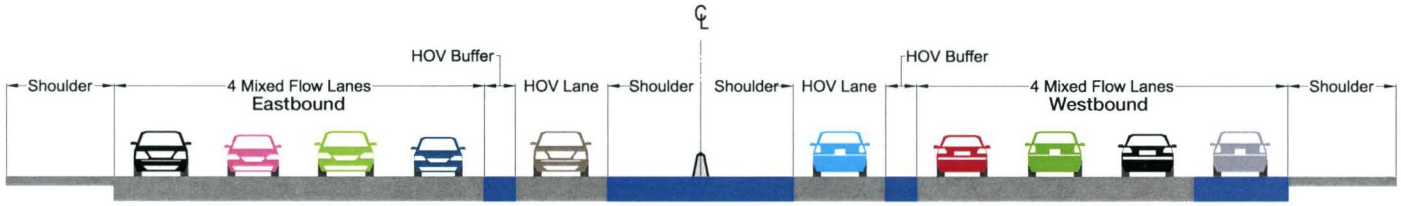
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

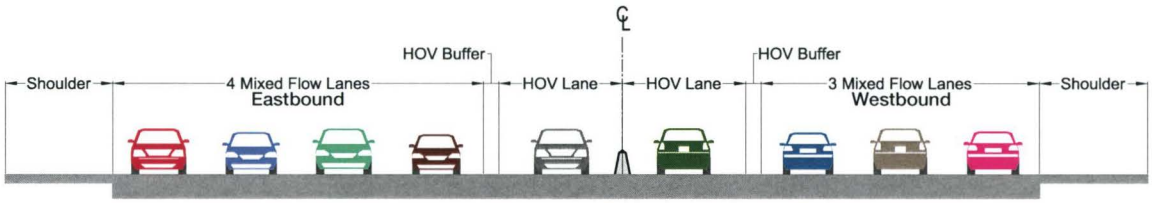
There are no scheduled Baseline improvements within this segment.
Proposed improvements include converting the existing high occupancy vehicle (HOV) lanes to dual high occupancy toll (HOT) lanes in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

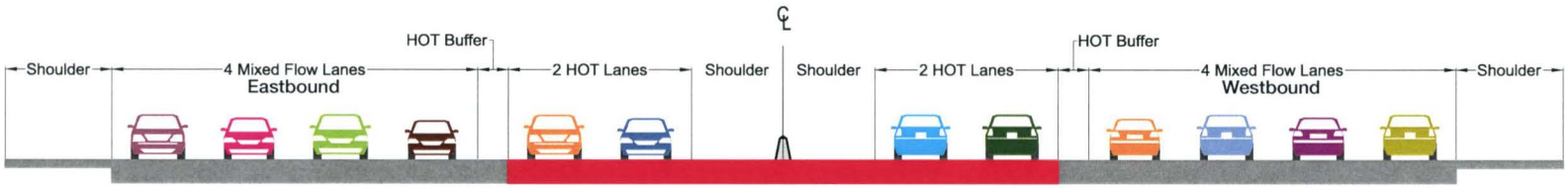
Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

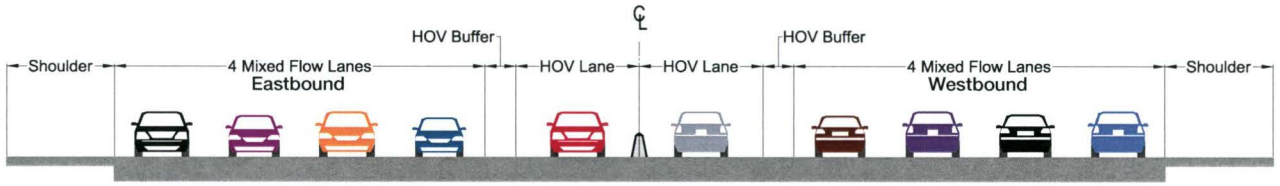
Notes:

Baseline improvements include adding 1 westbound general purpose lane from SR-57 to I-5, and providing standard lane widths through the corrdior.

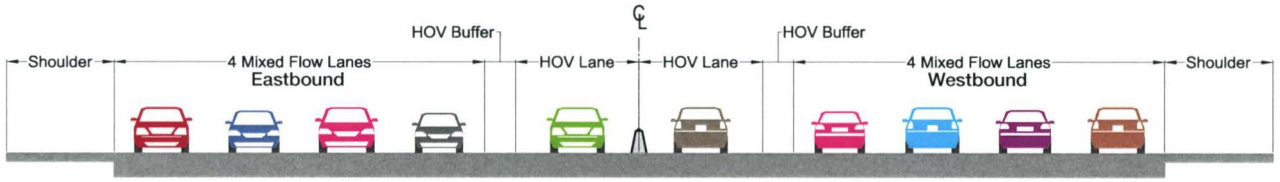
Proposed improvements include converting the existing high occupancy vehicle (HOV) lanes to dual high occupancy toll (HOT) lanes in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



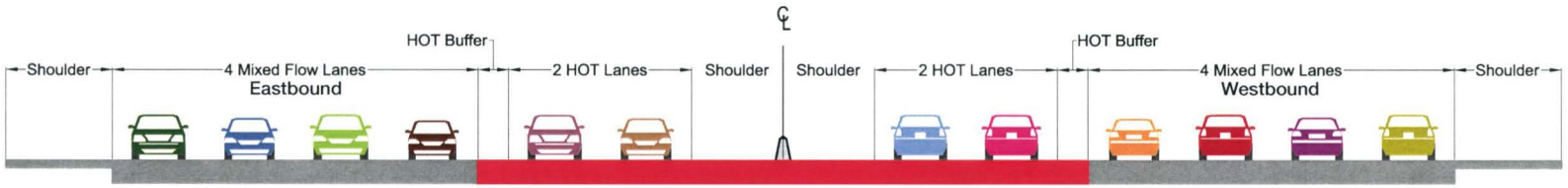
EXISTING YEAR 2008 CONDITION

Legend

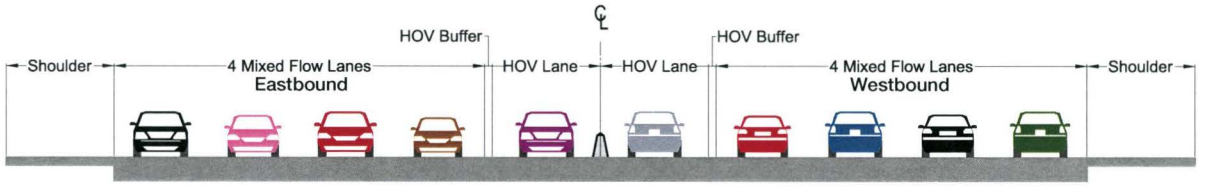
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

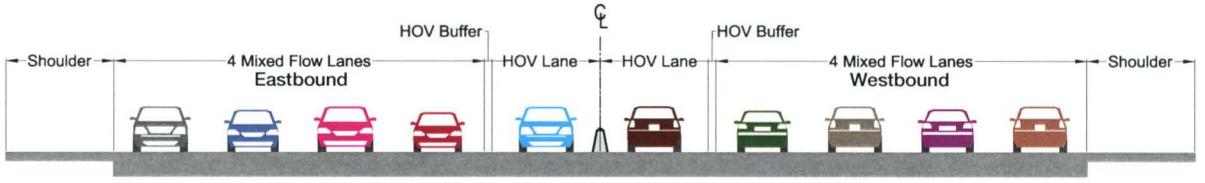
There are no scheduled Baseline improvements within this segment.
Proposed improvements include converting the existing high occupancy vehicle (HOV) lanes to dual high occupancy toll (HOT) lanes in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



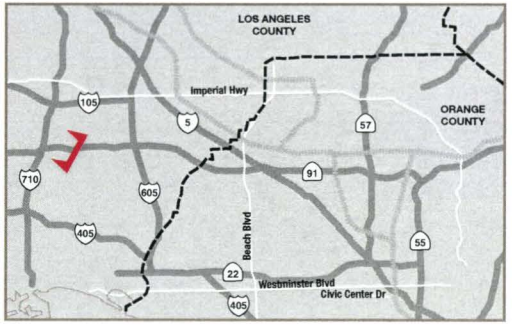
EXISTING YEAR 2008 CONDITION

Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

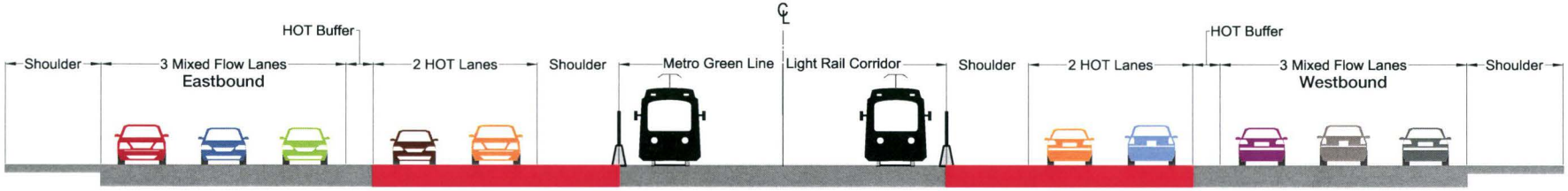
Notes:

There are no scheduled Baseline improvements within this segment.
Proposed improvements include converting the existing high occupancy vehicle (HOV) lanes to dual high occupancy toll (HOT) lanes in each direction.

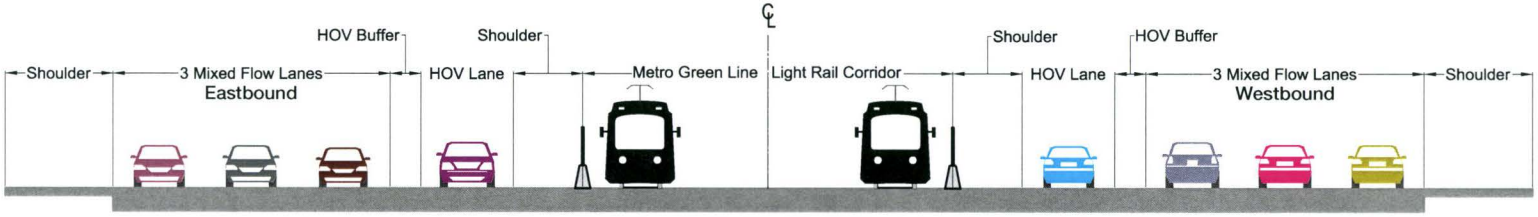


Public-Private Partnership: High Occupancy Toll (HOT) Lanes

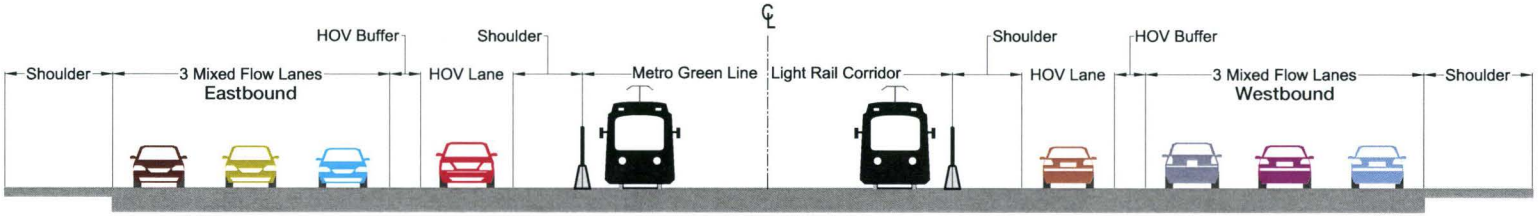
Location: I-105 between I-605 and I-710



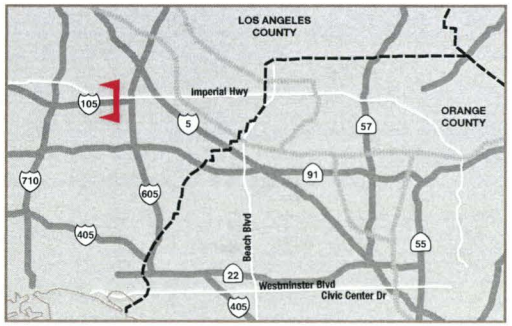
PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

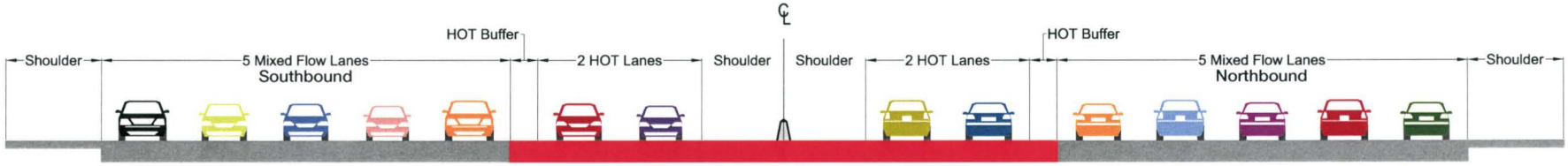


Legend

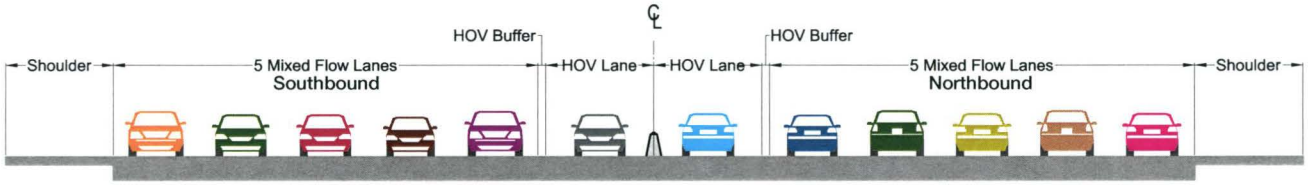
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

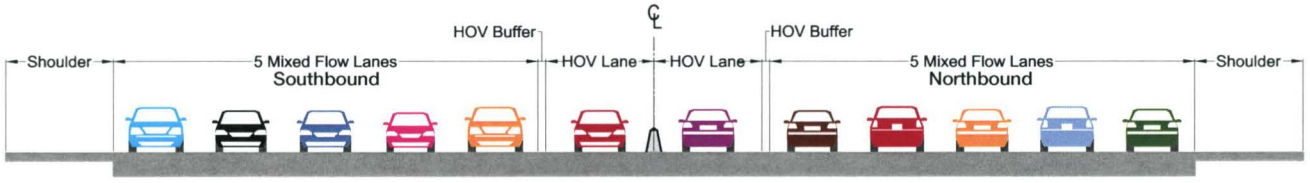
There are no scheduled Baseline improvements within this segment.
Proposed improvements include converting the existing high occupancy vehicle (HOV) lanes to dual high occupancy toll (HOT) lanes in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



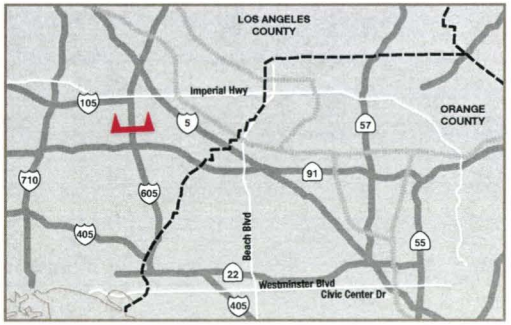
EXISTING YEAR 2008 CONDITION

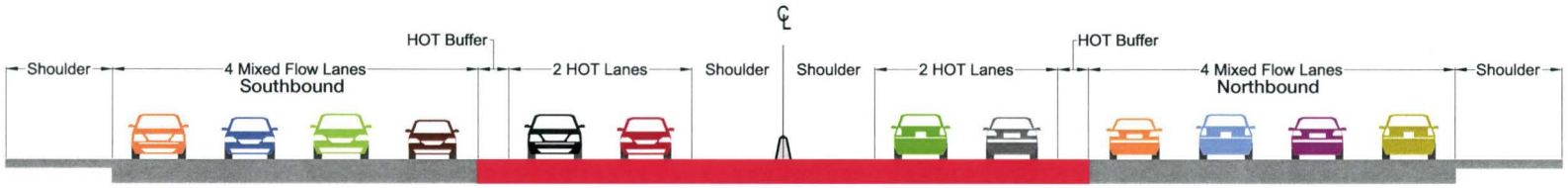
Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

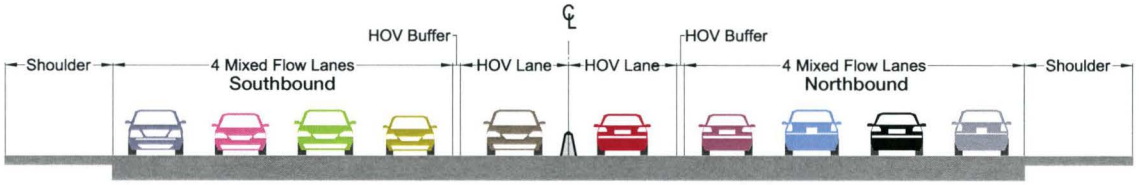
Notes:

There are no scheduled Baseline improvements within this segment.
Proposed improvements include converting the existing high occupancy vehicle (HOV) lanes to dual high occupancy toll (HOT) lanes in each direction.

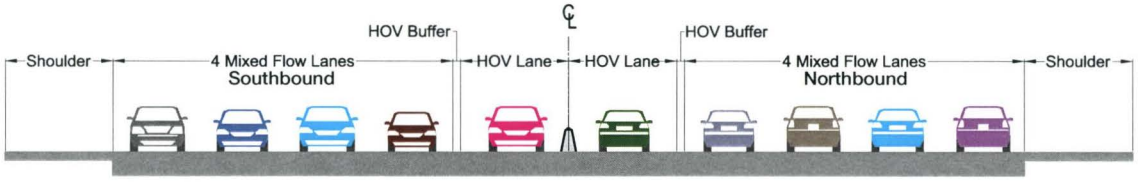




PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



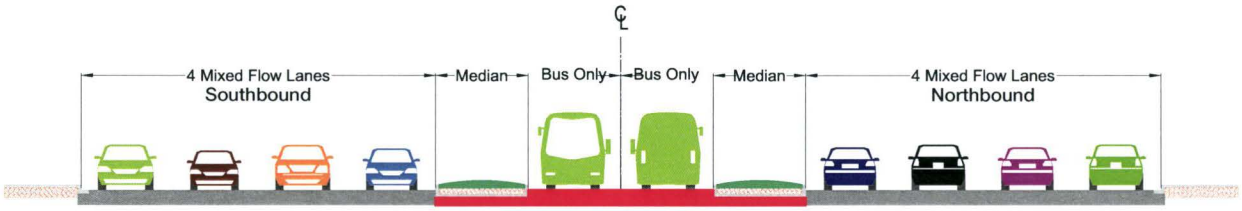
EXISTING YEAR 2008 CONDITION

Legend

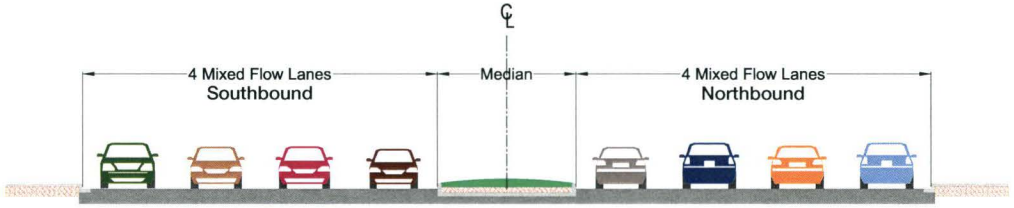
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

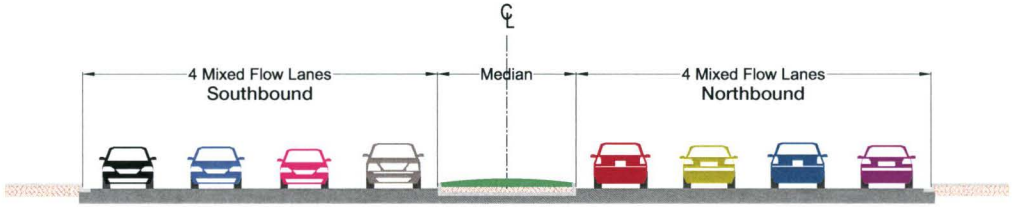
There are no scheduled Baseline improvements within this segment.
Proposed improvements include converting the existing high occupancy vehicle (HOV) lanes to dual high occupancy toll (HOT) lanes in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



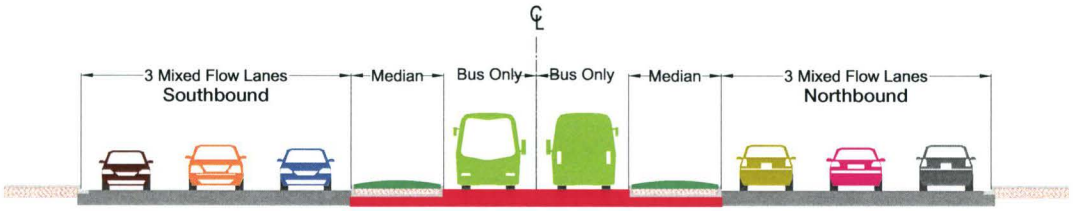
EXISTING YEAR 2008 CONDITION

Legend

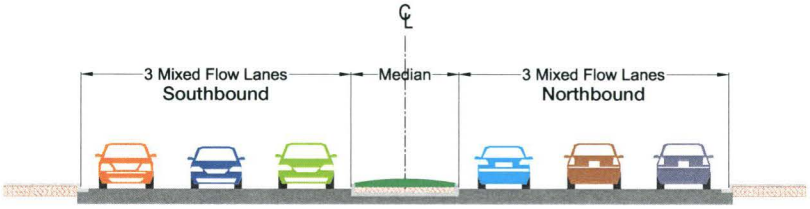
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

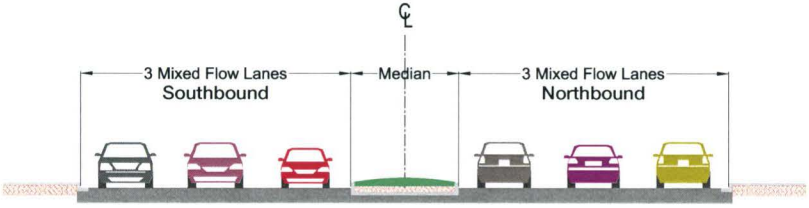
There are no scheduled Baseline improvements along this route.
Existing median width varies from 12 feet to 18 feet.
Proposed improvements include converting the existing median to an exclusive Rapid Bus corridor with one bus lane in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



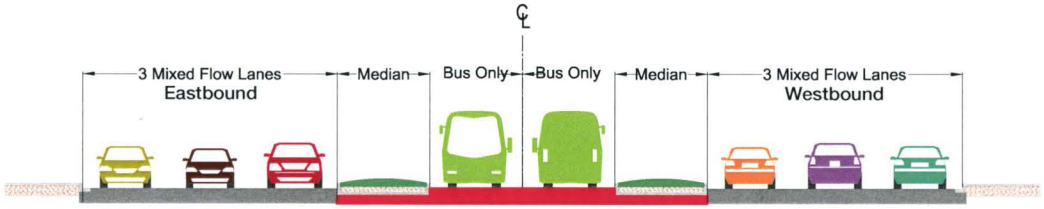
EXISTING YEAR 2008 CONDITION

Legend

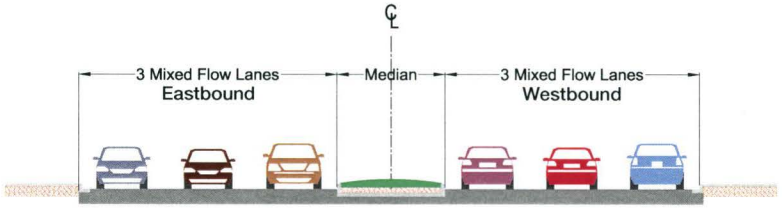
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

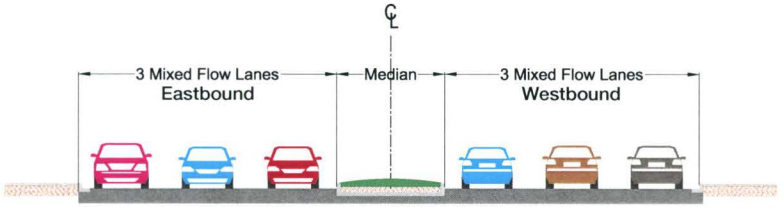
There are no scheduled Baseline improvements along this route.
Existing median width varies from 12 feet to 18 feet.
Proposed improvements include converting the existing median to an exclusive Rapid Bus corridor with one bus lane in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



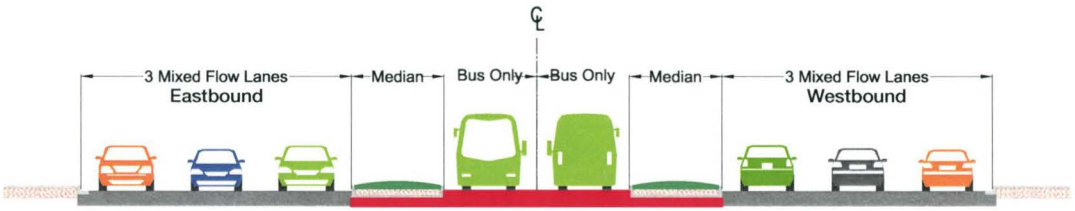
EXISTING YEAR 2008 CONDITION

Legend

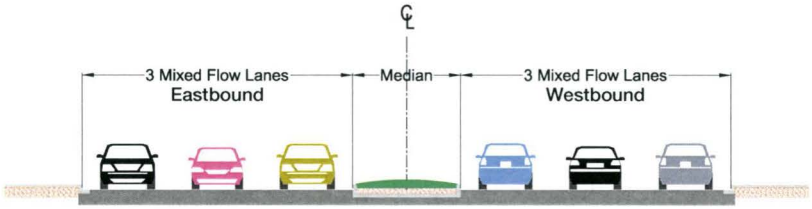
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

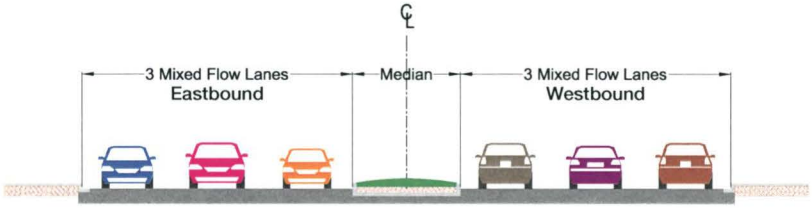
There are no scheduled Baseline improvements along this route.
Proposed improvements include converting the existing median to an exclusive Rapid Bus corridor with one bus lane in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



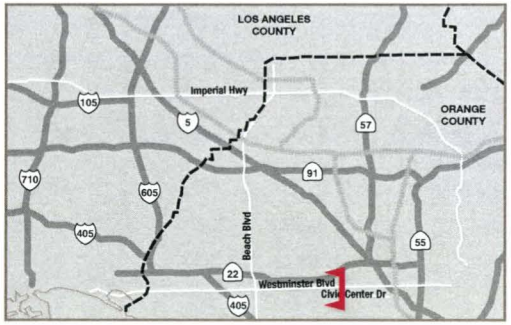
EXISTING YEAR 2008 CONDITION

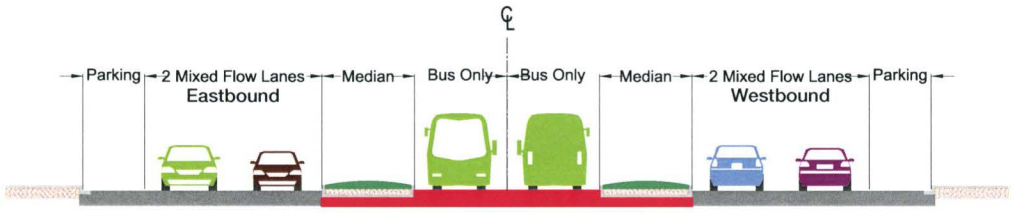
Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

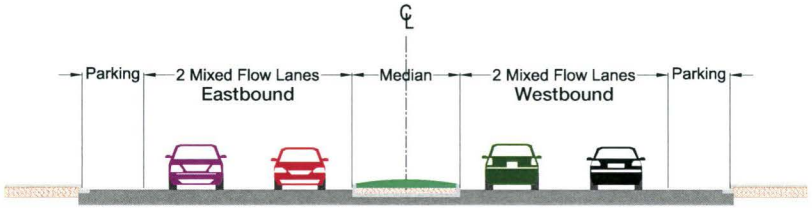
Notes:

There are no scheduled Baseline improvements along this route.
Proposed improvements include converting the existing median to an exclusive Rapid Bus corridor with one bus lane in each direction.

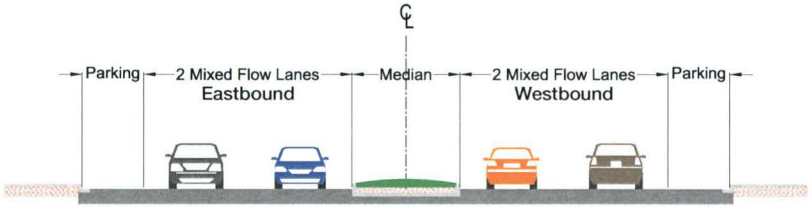




PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



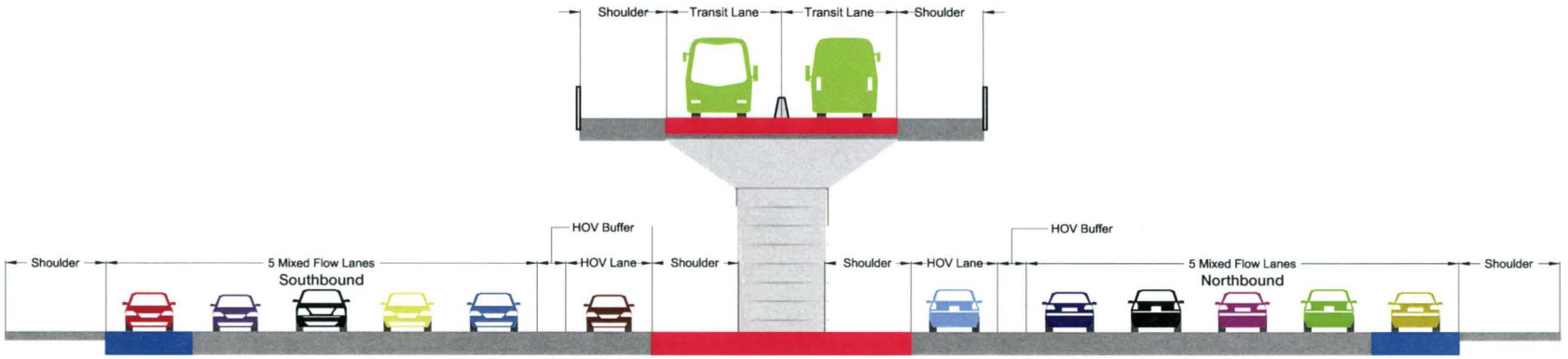
EXISTING YEAR 2008 CONDITION

Legend

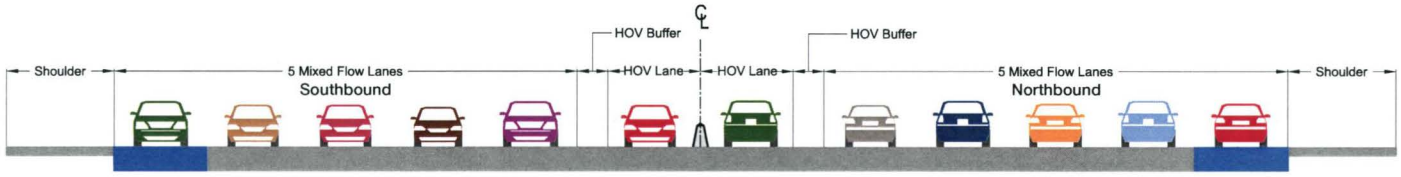
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

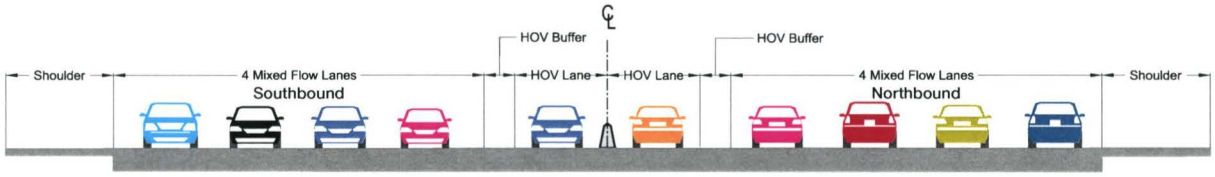
There are no scheduled Baseline improvements along this route.
The existing median varies from raised concrete to two-way left-turn lane in different segments of this corridor.
Proposed improvements include converting the existing median to an exclusive Rapid Bus corridor with one bus lane in each direction.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



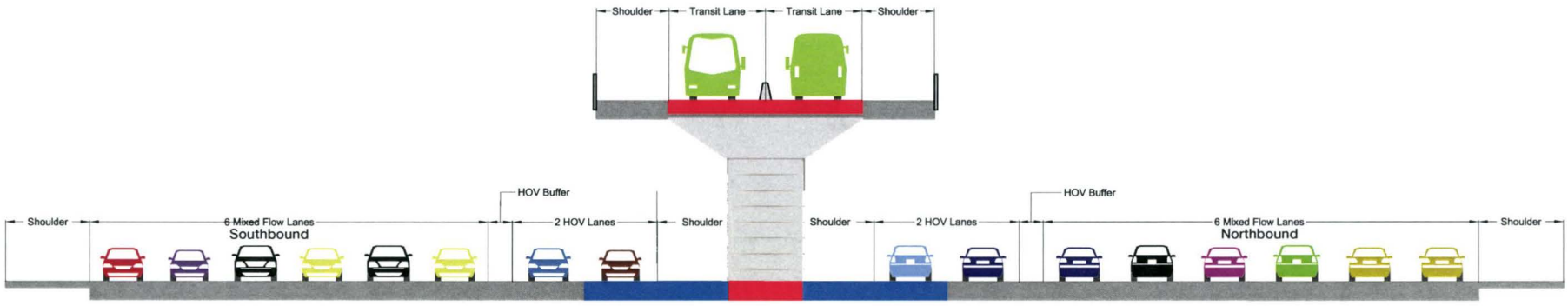
EXISTING YEAR 2008 CONDITION

Legend

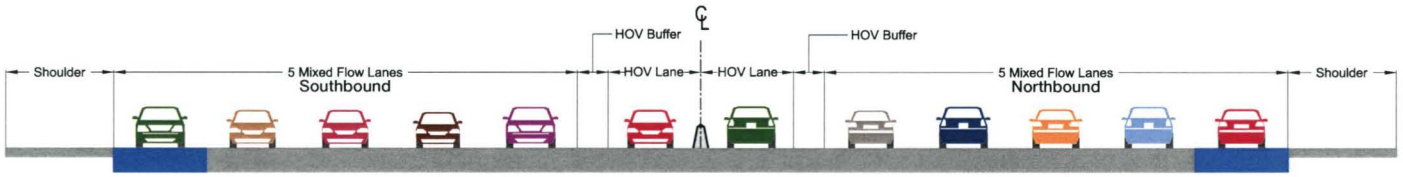
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

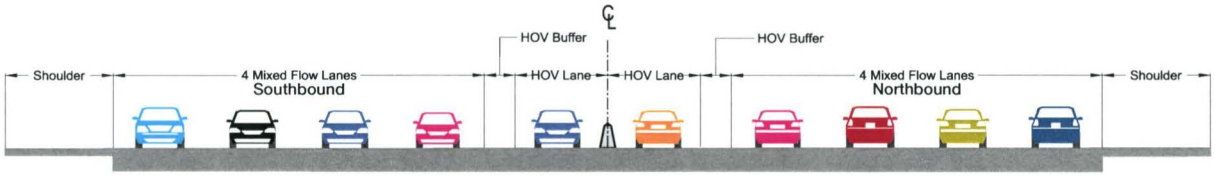
Baseline improvements within this segment include adding a 5th mixed flow lane in each direction. Proposed improvements include an exclusive Bus Rapid Transit corridor/fully elevated transit bus or rail service to provide service between Long Beach and Irvine.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

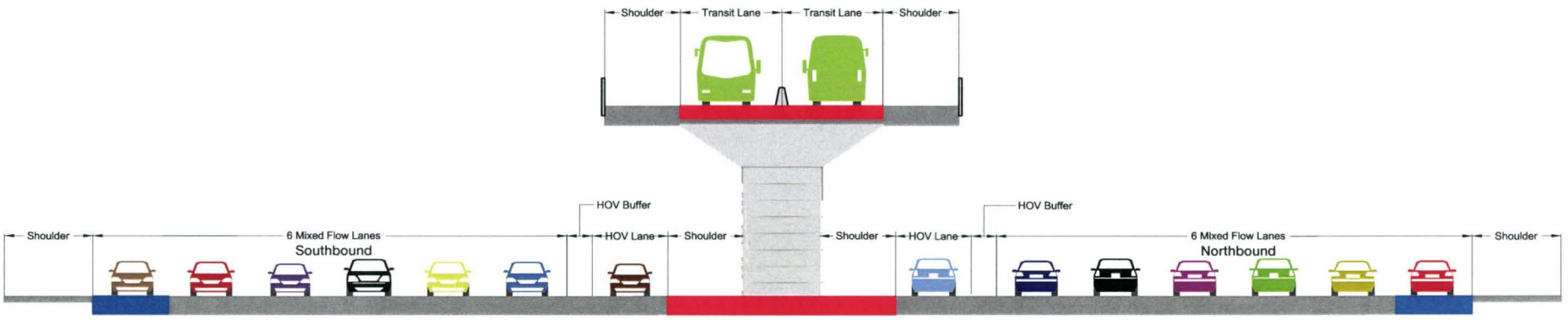
Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

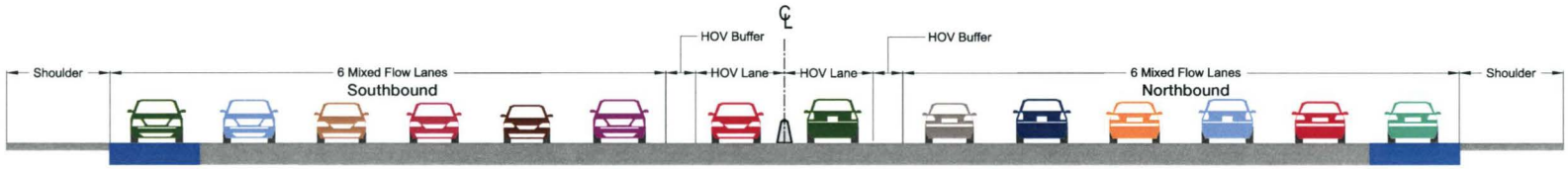
Notes:

Baseline improvements within this segment include adding a 2nd HOV lane and standard HOV shoulder in each direction.

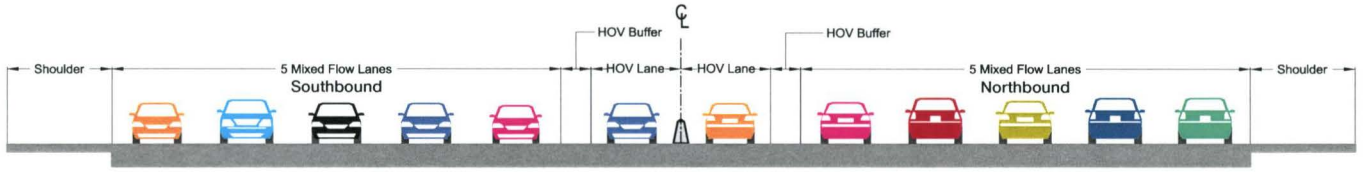
Proposed improvements include and exclusive Bus Rapid Transit corridor/fully elevated transit bus or rail service to provide service between Long Beach.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



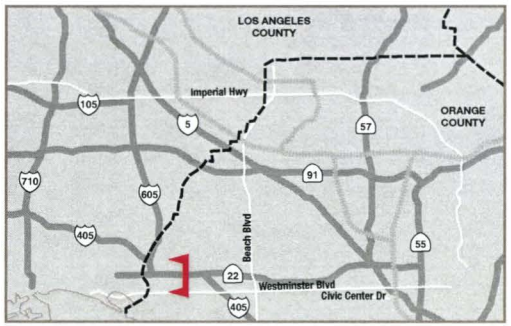
EXISTING YEAR 2008 CONDITION

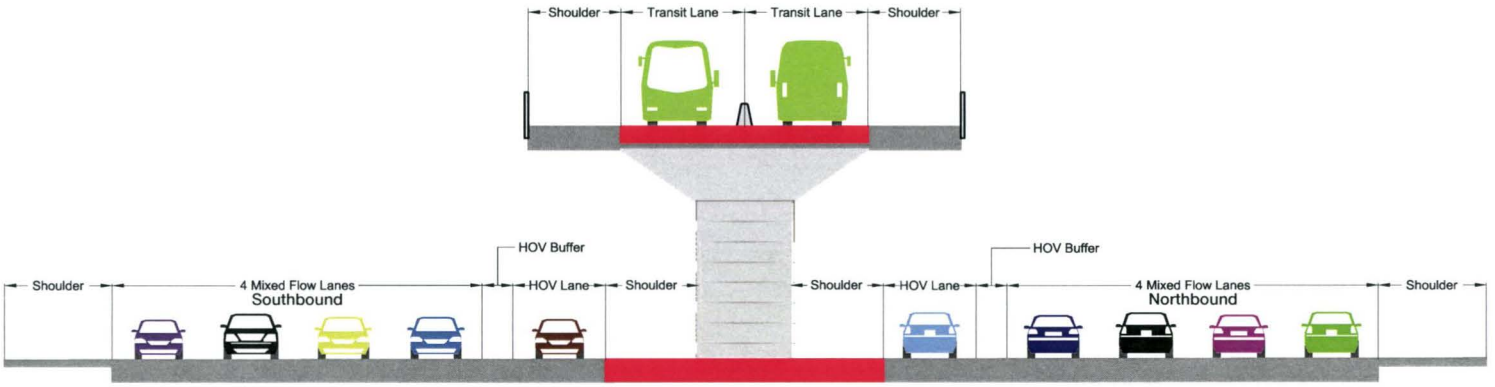
Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

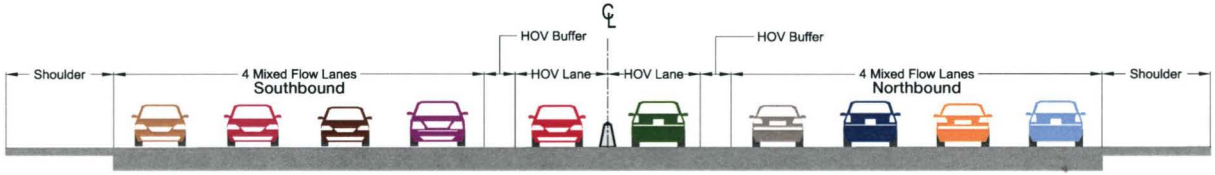
Notes:

Baseline improvements within this segment include adding a 6th mixed flow lane in each direction. Proposed improvements include and exclusive Bus Rapid Transit corridor/fully elevated transit bus or rail service to provide service between Long Beach.

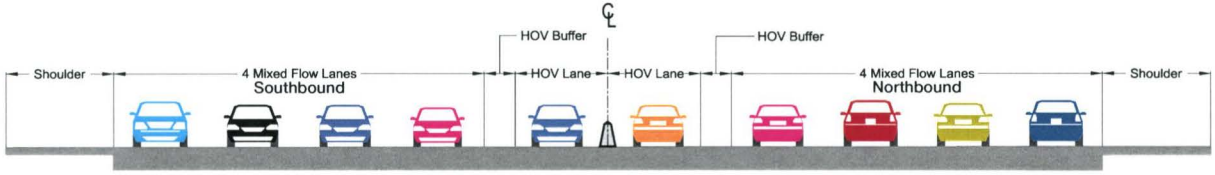




PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



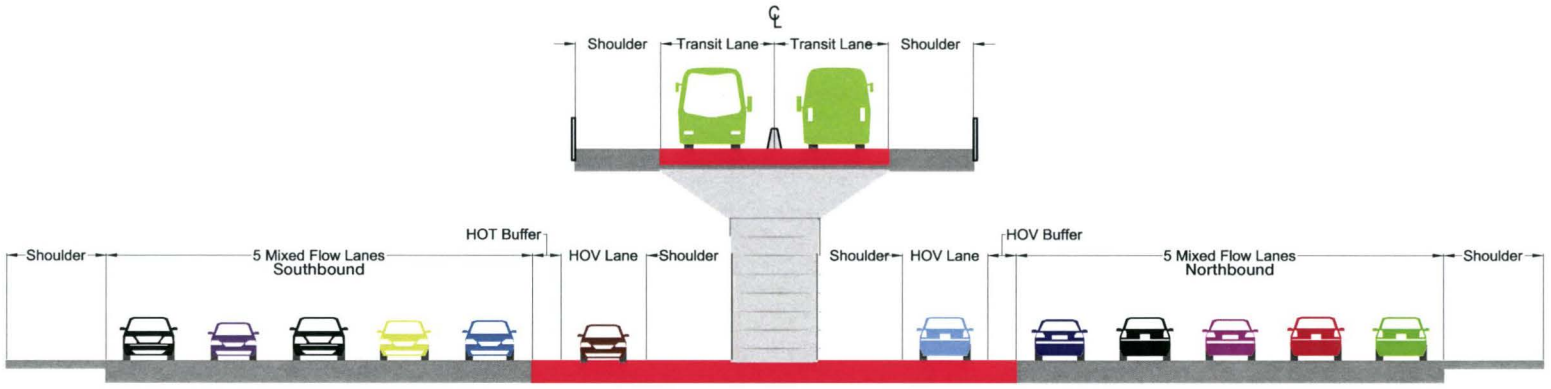
EXISTING YEAR 2008 CONDITION

Legend

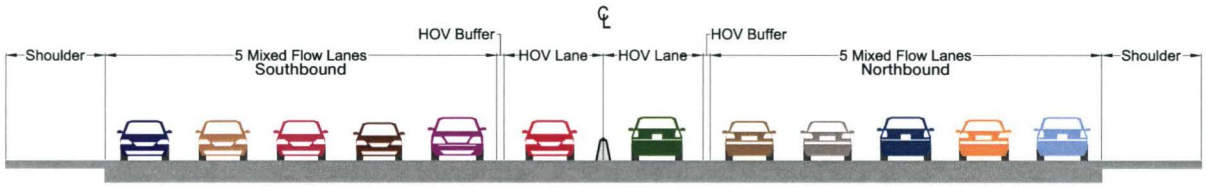
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

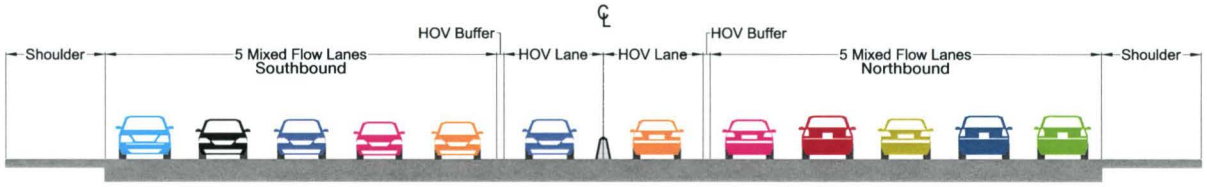
There are no scheduled Baseline improvements with this segment.
Proposed improvements include an exclusive Bus Rapid Transit corridor/fully elevated transit bus or rail service to provide service between Long Beach.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

Legend

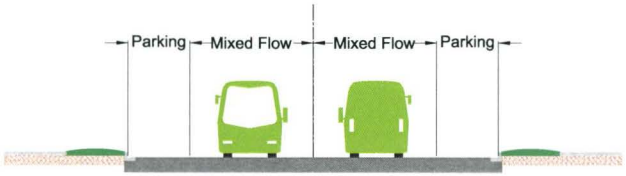
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

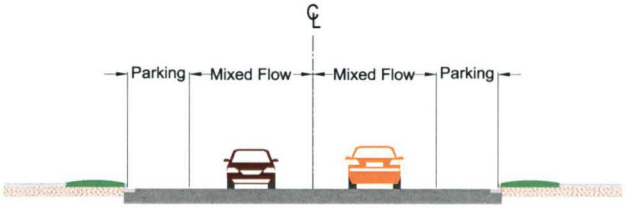
There are no scheduled Baseline improvements with this segment.
Proposed improvements include adding an exclusive Bus Rapid Transit corridor/fully elevated transit bus or rail service between the Pacific Electric right-of-way and the Norwalk Green Line station, and freeway widening to provide standard shoulder, HOV lane width, and HOV buffer width.

Pacific Electric ROW Alternative 1 - Grade Separated BRT

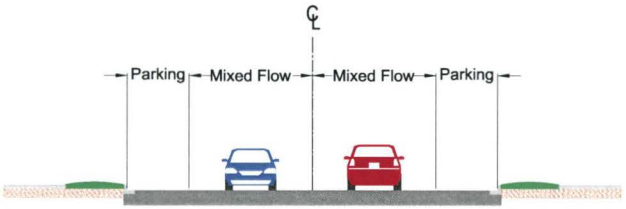
Location: Civic Center Drive from Minter Street to Bristol Street



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

Legend

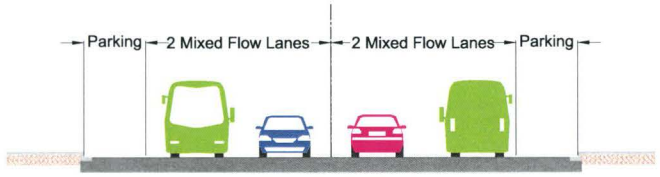
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

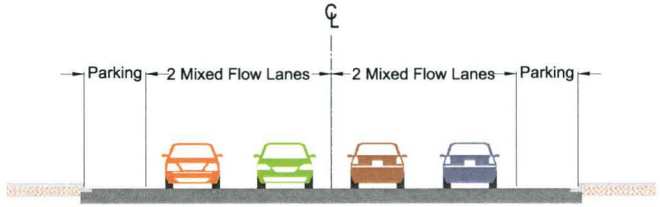
There are no scheduled Baseline improvements along this route.
The existing median in this segment is a striped two-way left-turn lane (TWLTL).
The Proposed condition includes Bus Rapid Transit service operating in mixed flow lanes on Civic Center Drive from SARTC to Fairview Street, and then traveling along the Pacific Electric right-of-way to I-605 with grade separated crossings at 29 locations. The BRT service would then take an I-605 HOV lane direct access ramp and travel on I-605 to the Norwalk Green Line Station.

Pacific Electric ROW Alternative 1 - Grade Separated BRT

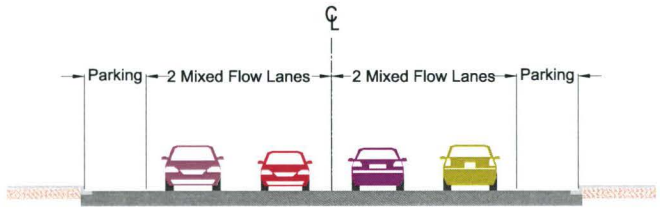
Location: Civic Center Drive from Bristol Street to Fairview Street



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

Legend

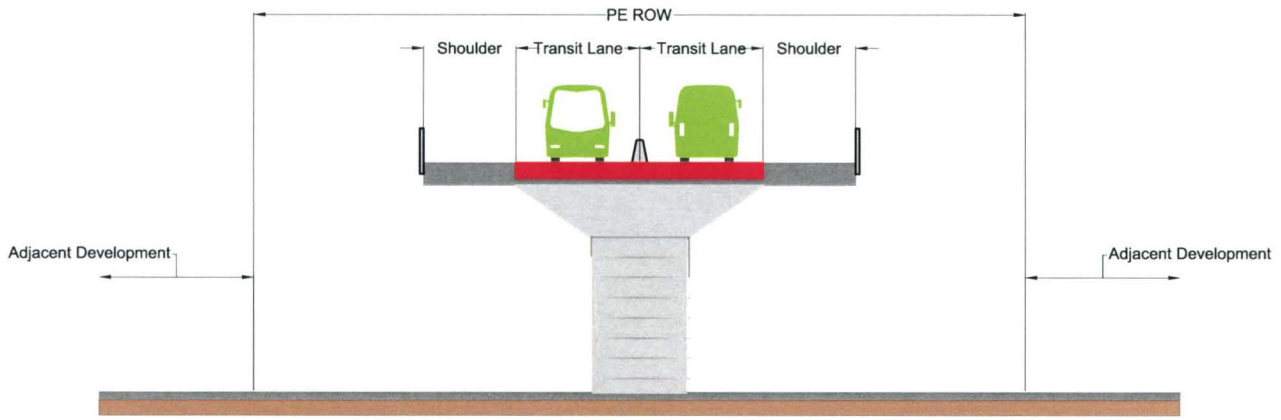
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

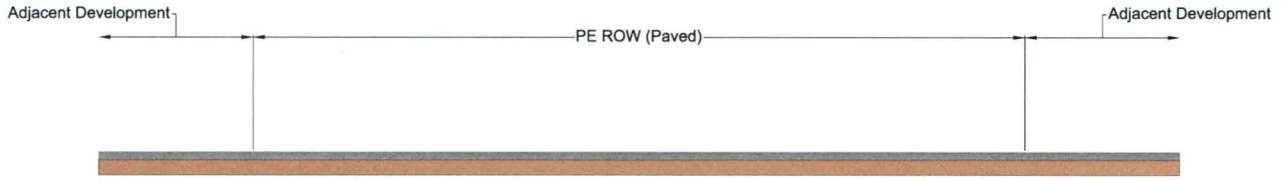
There are no scheduled Baseline improvements along this route.
The existing median in this segment is a striped two-way left-turn lane (TWLTL).
The Proposed condition includes Bus Rapid Transit service operating in mixed flow lanes on Civic Center Drive from SARTC to Fairview Street, and then traveling along the Pacific Electric right-of-way to I-605 with grade separated crossings at 29 locations. The BRT service would then take an I-605 HOV lane direct access ramp and travel on I-605 to the Norwalk Green Line Station.

Pacific Electric ROW Alternative 1 - Grade Separated BRT

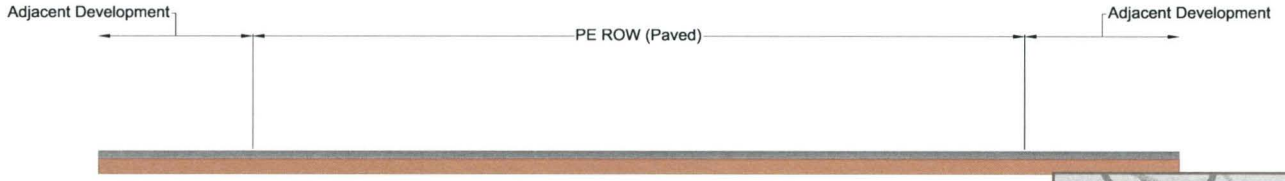
Location: Pacific Electric ROW - paved segment through the Costco and Home Depot parking lots in Garden Grove



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

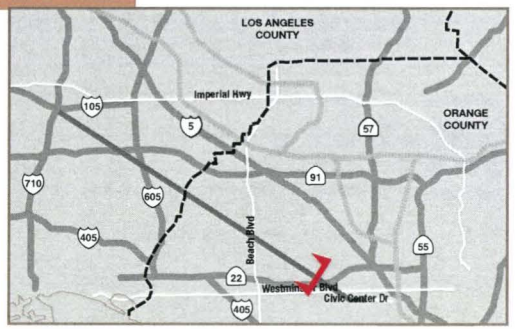
Legend

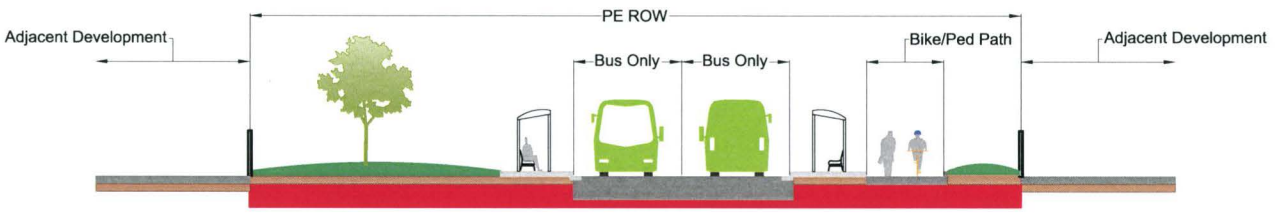
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

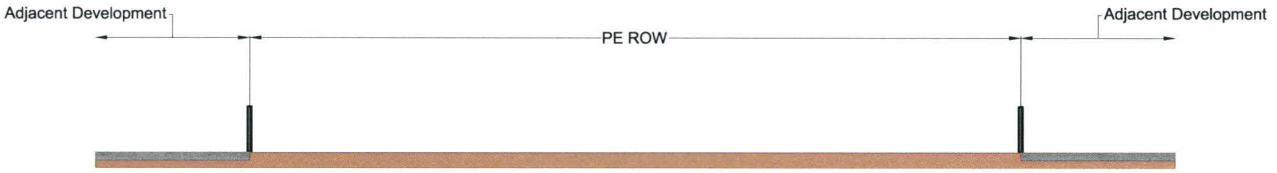
There are no scheduled Baseline improvements along this route.

The Proposed condition includes Bus Rapid Transit service operating in mixed flow lanes on Civic Center Drive from SARTC to Fairview Street, and then traveling along the Pacific Electric right-of-way to I-605 with grade separated crossings at 29 locations. The BRT service would then take an I-605 HOV lane direct access ramp and travel on I-605 to the Norwalk Green Line Station.

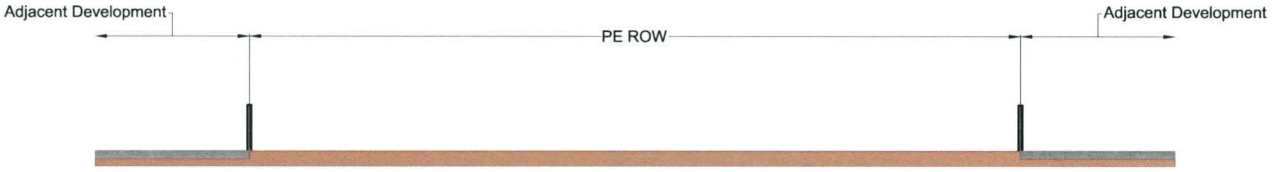




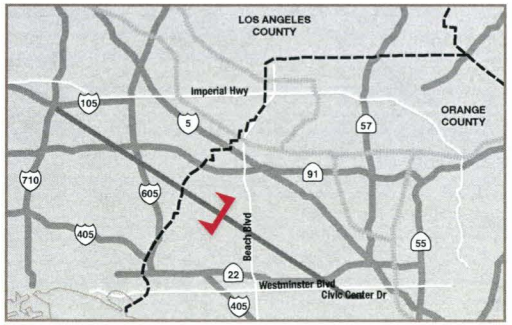
PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION



Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

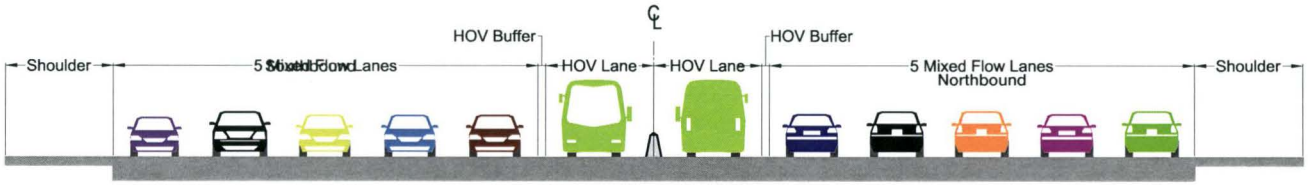
Notes:

There are no scheduled Baseline improvements along this route.

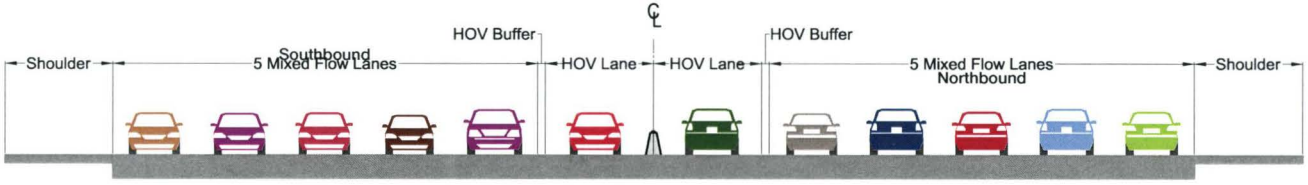
The Proposed condition includes Bus Rapid Transit service operating in mixed flow lanes on Civic Center Drive from SARTC to Fairview Street, and then traveling along the Pacific Electric right-of-way to I-605 with grade separated crossings at 29 locations. The BRT service would then take an I-605 HOV lane direct access ramp and travel on I-605 to the Norwalk Green Line Station.

Pacific Electric ROW Alternative 1 - Grade Separated BRT

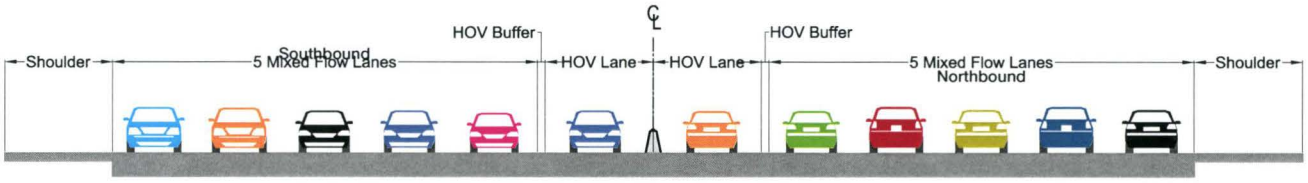
Location: I-605 between SR-91 and I-105



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

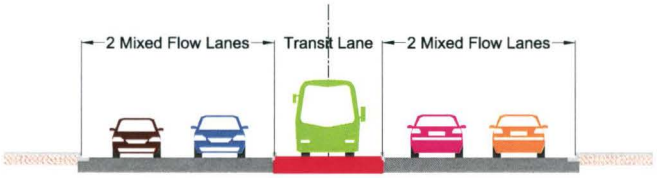
Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

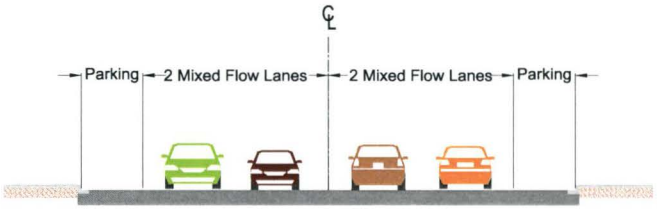
Notes:

There are no scheduled Baseline improvements along this route.

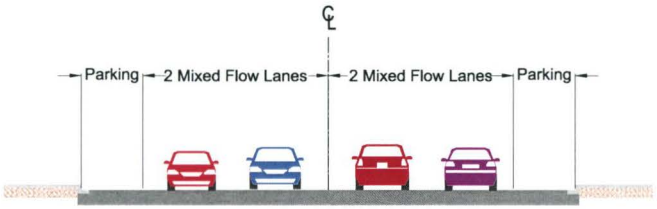
The Proposed condition includes Bus Rapid Transit service operating in mixed flow lanes on Civic Center Drive from SARTC to Fairview Street, and then traveling along the Pacific Electric right-of-way to I-605 with grade separated crossings at 29 locations. The BRT service would then take an I-605 HOV lane direct access ramp and travel on I-605 to the Norwalk Green Line Station.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

Legend

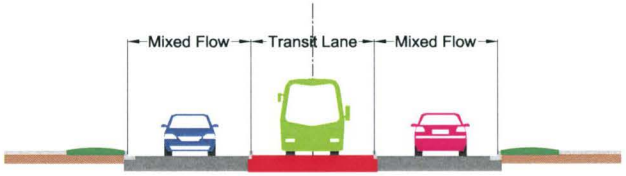
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

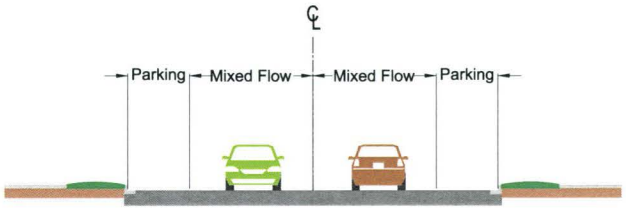
There are no scheduled Baseline improvements along this route.
The existing median in this segment is a striped two-way left-turn lane (TWLTL).
The Proposed condition includes Bus Rapid Transit service operating in mixed flow lanes on Civic Center Drive from SARTC to Fairview Street, and then traveling along the Pacific Electric right-of-way to I-605 with grade separated crossings at 29 locations. The BRT service would then take an I-605 HOV lane direct access ramp and travel on I-605 to the Norwalk Green Line Station.

Pacific Electric ROW Alternative 2 - Elevated BRT

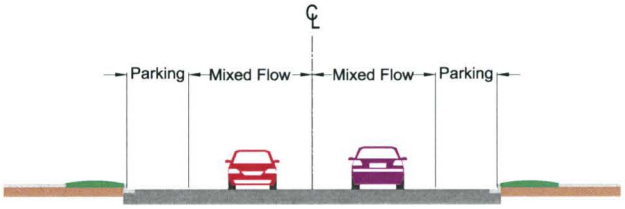
Location: Civic Center Drive from Bristol Street to Fairview Street



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



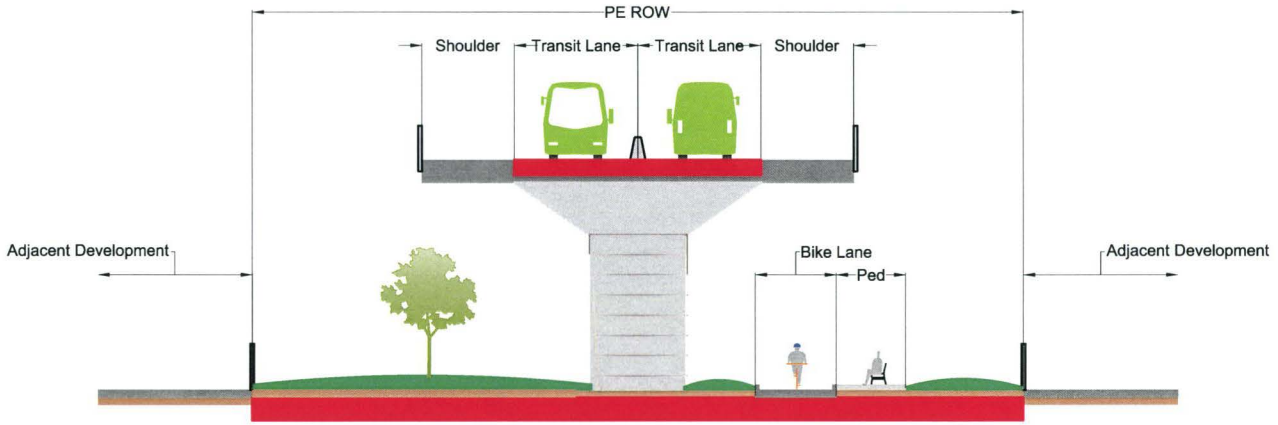
EXISTING YEAR 2008 CONDITION

Legend

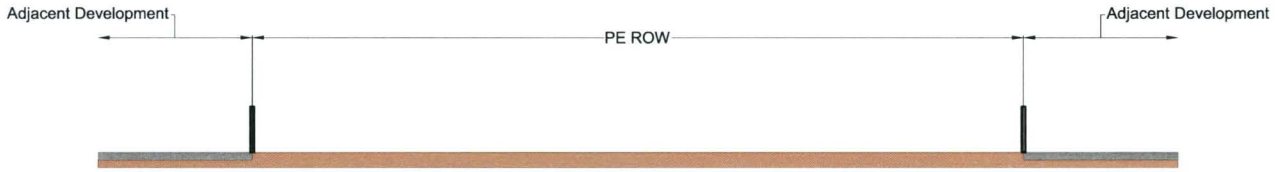
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

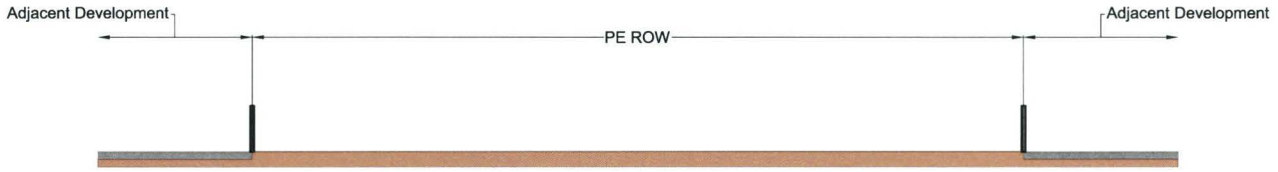
There are no scheduled Baseline improvements along this route.
The existing median in this segment is a striped two-way left-turn lane (TWLTL).
The Proposed condition includes Bus Rapid Transit service operating in mixed flow lanes on Civic Center Drive from SARTC to Fairview Street, and then traveling along the Pacific Electric right-of-way to I-605 with grade separated crossings at 29 locations. The BRT service would then take an I-605 HOV lane direct access ramp and travel on I-605 to the Norwalk Green Line Station.



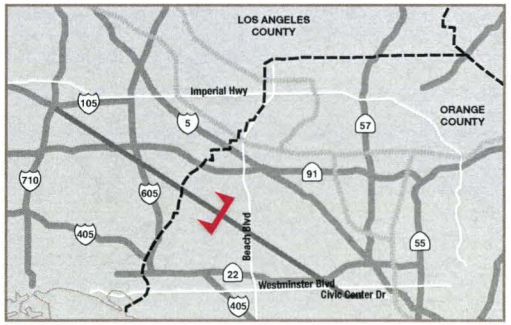
PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

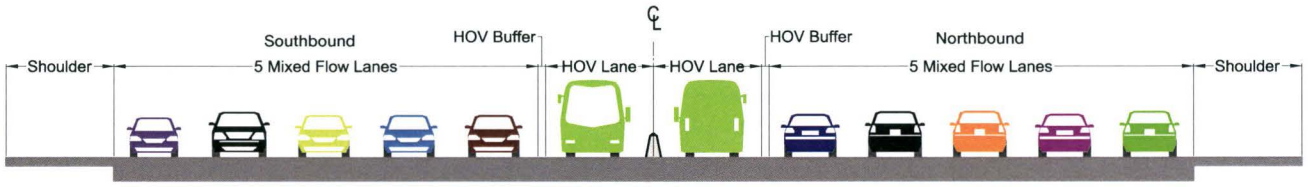


Legend

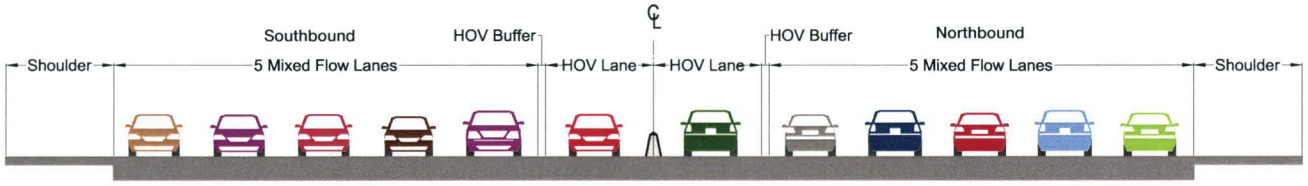
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

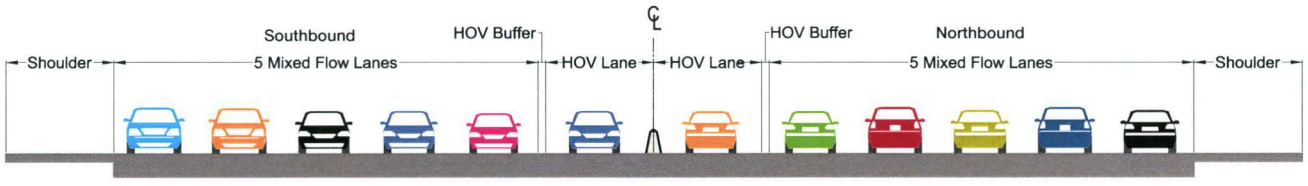
There are no scheduled Baseline improvements along this route.
The Proposed condition includes Bus Rapid Transit service operating in mixed flow lanes on Civic Center Drive from SARTC to Fairview Street, and then traveling along the Pacific Electric right-of-way to I-605 with grade separated crossings at 29 locations. The BRT service would then take an I-605 HOV lane direct access ramp and travel on I-605 to the Norwalk Green Line Station.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

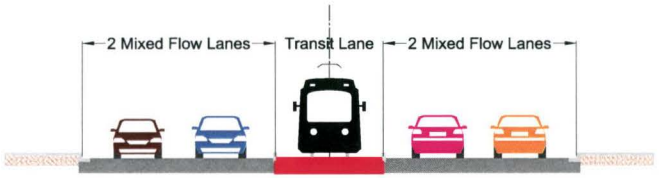
Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

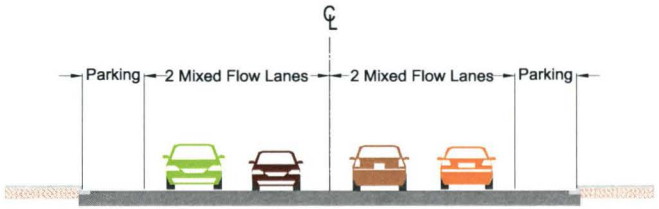
Notes:

There are no scheduled Baseline improvements along this route.

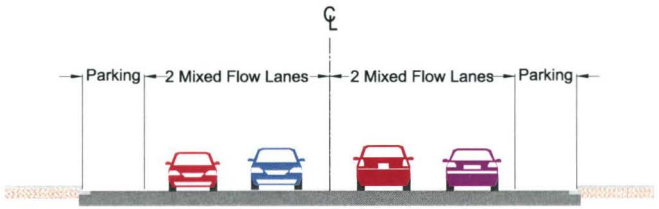
The Proposed condition includes Bus Rapid Transit service operating in mixed flow lanes on Civic Center Drive from SARTC to Fairview Street, and then traveling along the Pacific Electric right-of-way to I-605 with grade separated crossings at 29 locations. The BRT service would then take an I-605 HOV lane direct access ramp and travel on I-605 to the Norwalk Green Line Station.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



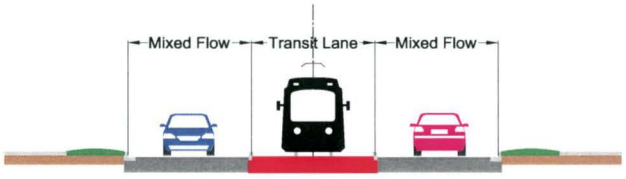
EXISTING YEAR 2008 CONDITION

Legend

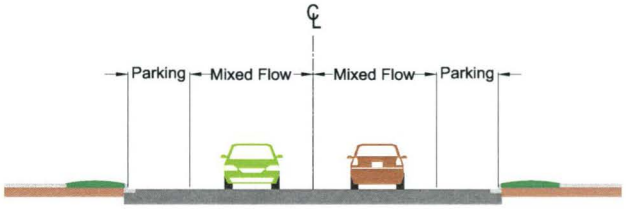
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

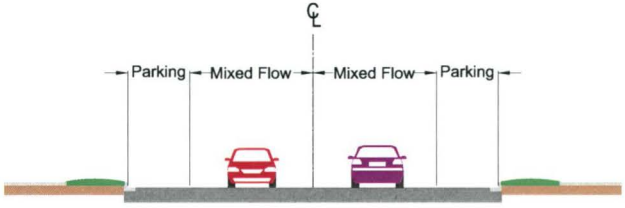
There are no scheduled Baseline improvements along this route.
The Proposed condition includes Light Rail Transit service operating in exclusive transit lanes on Civic Center Drive and Santa Ana Boulevard from SARTC to Fairview Street, and then traveling along the Pacific Electric right-of-way on an elevated guideway to I-105. The LRT service would then share the Green Line rail corridor to the Wilmington Avenue station.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



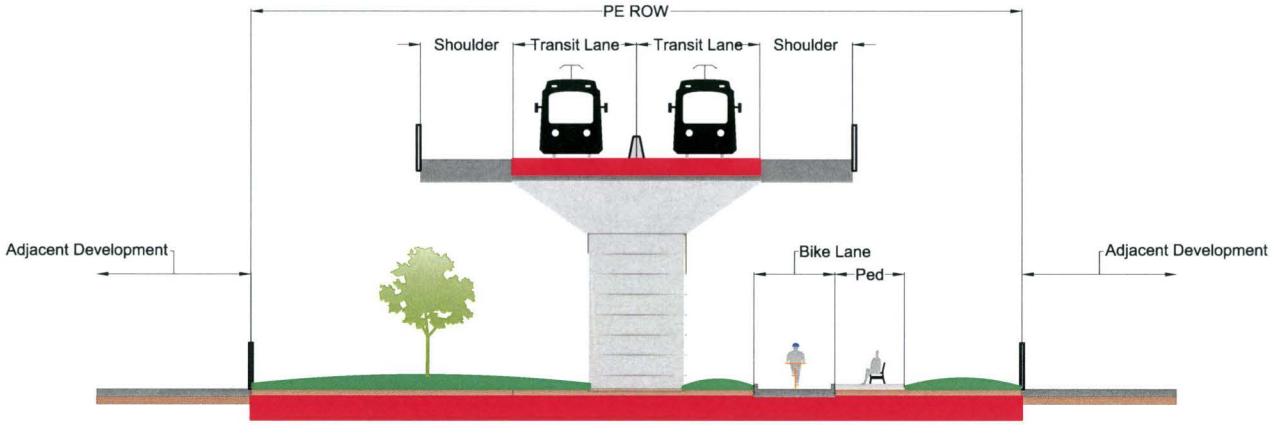
EXISTING YEAR 2008 CONDITION

Legend

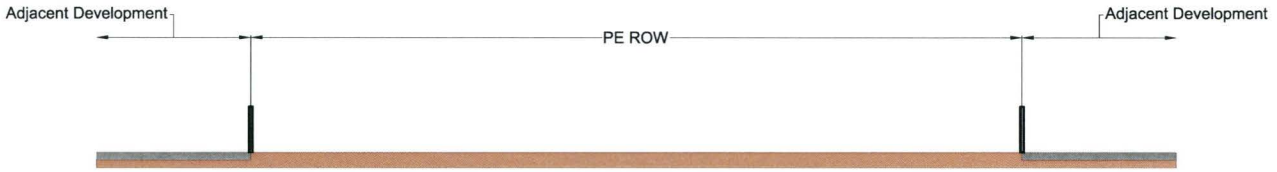
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

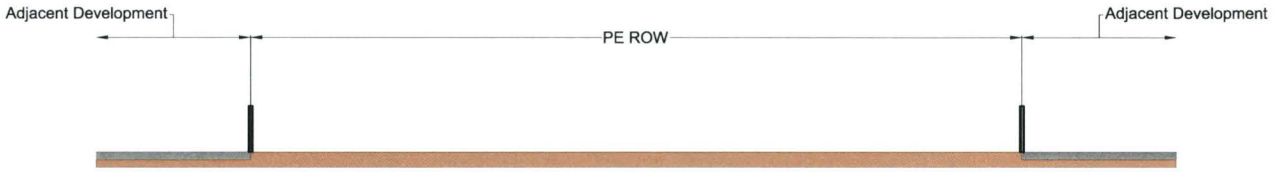
There are no scheduled Baseline improvements along this route.
The Proposed condition includes Light Rail Transit service operating in exclusive transit lanes on Civic Center Drive and Santa Ana Boulevard from SARTC to Fairview Street, and then traveling along the Pacific Electric right-of-way on an elevated guideway to I-105. The LRT service would then share the Green Line rail corridor to the Wilmington Avenue station.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

Legend

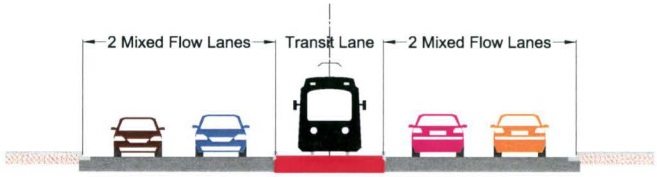
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

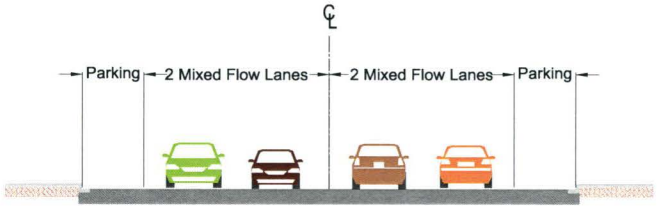
There are no scheduled Baseline improvements along this route.
The Proposed condition includes Light Rail Transit service operating in exclusive transit lanes on Civic Center Drive and Santa Ana Boulevard from SARTC to Fairview Street, and then traveling along the Pacific Electric right-of-way on an elevated guideway to I-105. The LRT service would then share the Green Line rail corridor to the Wilmington Avenue station.

Pacific Electric ROW Alternative 4 - Elevated Hybrid BRT/LRT

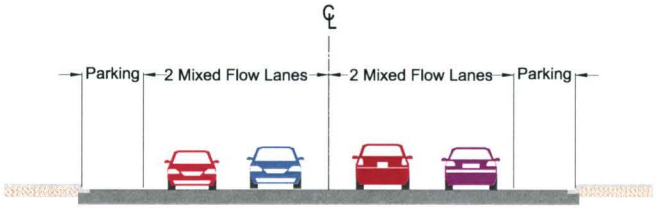
Location: Civic Center Drive from Minter Street to Bristol Street



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

Legend

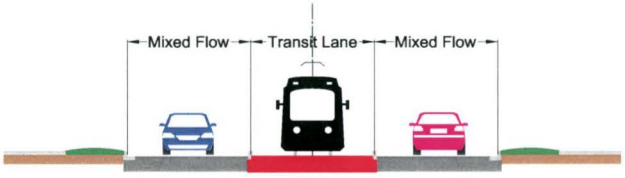
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

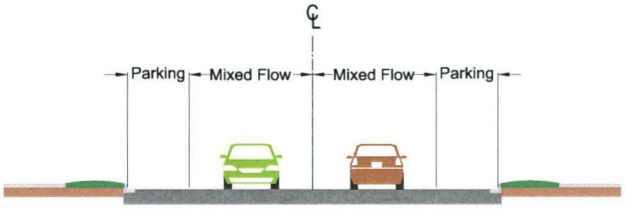
There are no scheduled Baseline improvements along this route.
The Proposed condition includes LRT service operating at-grade in exclusive lanes between the SARTC and the PE ROW along Civic Center Drive and Santa Ana Boulevard. The LRT would then travel within the PE ROW on an elevated dual-track to Valley View Street. BRT service would operate in mixed flow lanes on Valley View Street from the PE ROW to Orangethorpe Avenue, then on Orangethorpe Avenue from Valley View Street to I-605. The BRT service would then travel on I-605 to the Norwalk Metro Green Line Station.

Pacific Electric ROW Alternative 4 - Elevated Hybrid BRT/LRT

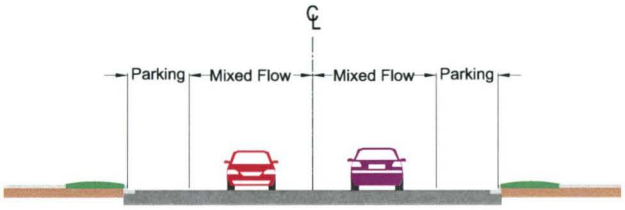
Location: Civic Center Drive from Bristol Street to Fairview Street



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



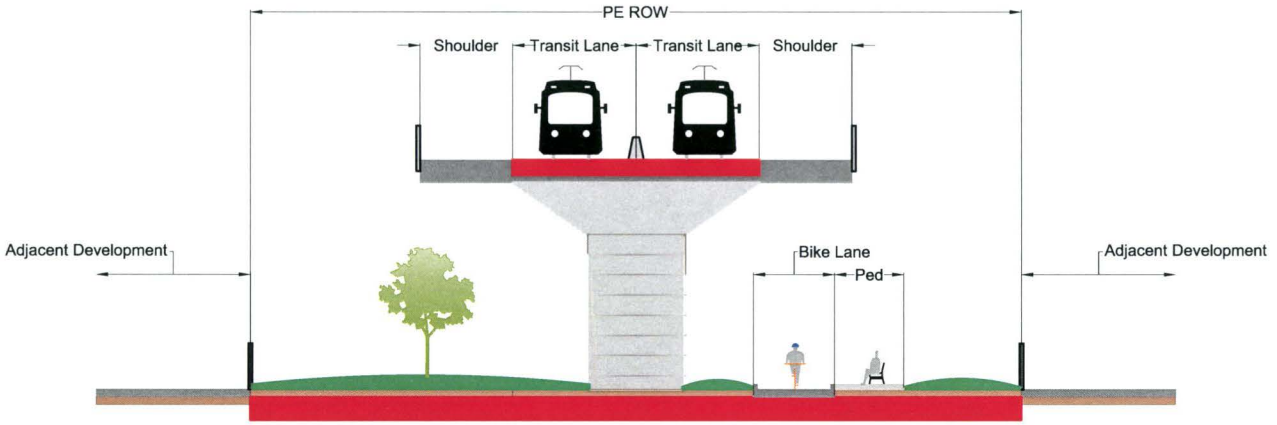
EXISTING YEAR 2008 CONDITION

Legend

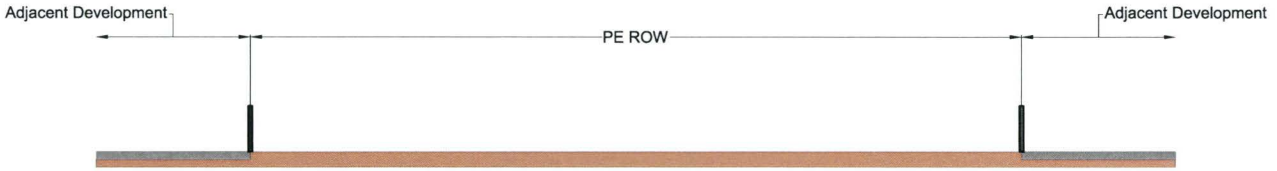
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

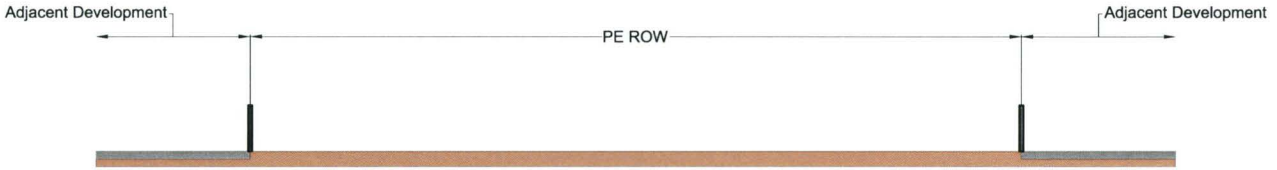
There are no scheduled Baseline improvements along this route.
The Proposed condition includes LRT service operating at-grade in exclusive lanes between the SARTC and the PE ROW along Civic Center Drive and Santa Ana Boulevard. The LRT would then travel within the PE ROW on an elevated dual-track to Valley View Street. BRT service would operate in mixed flow lanes on Valley View Street from the PE ROW to Orangethorpe Avenue, then on Orangethorpe Avenue from Valley View Street to I-605. The BRT service would then travel on I-605 to the Norwalk Metro Green Line Station.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

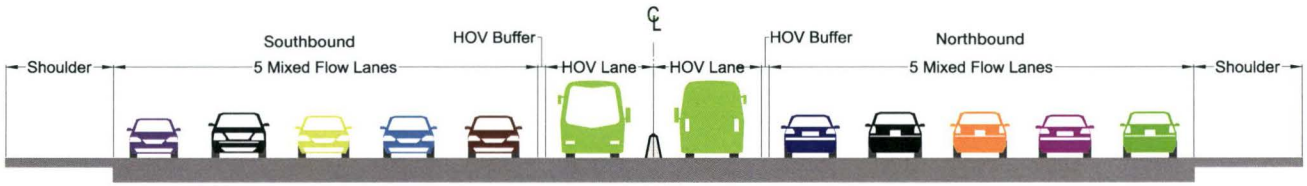
Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

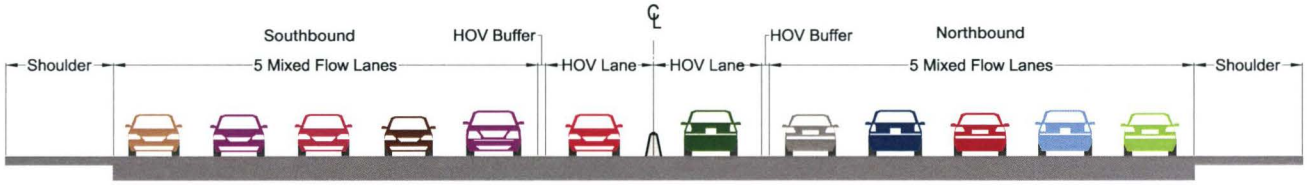
Notes:

There are no scheduled Baseline improvements along this route.

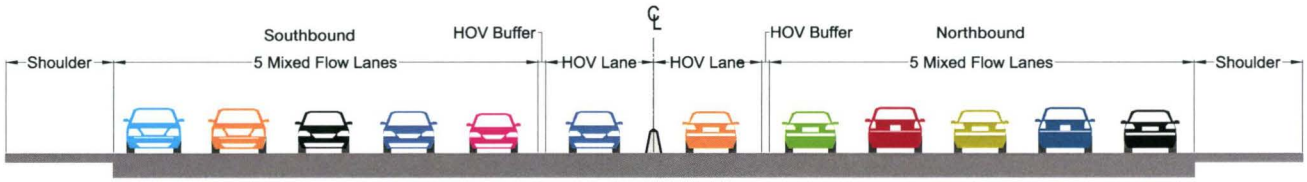
The Proposed condition includes LRT service operating at-grade in exclusive lanes between the SARTC and the PE ROW along Civic Center Drive and Santa Ana Boulevard. The LRT would then travel within the PE ROW on an elevated dual-track to Valley View Street. BRT service would operate in mixed flow lanes on Valley View Street from the PE ROW to Orangethorpe Avenue, then on Orangethorpe Avenue from Valley View Street to I-605. The BRT service would then travel on I-605 to the Norwalk Metro Green Line Station.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



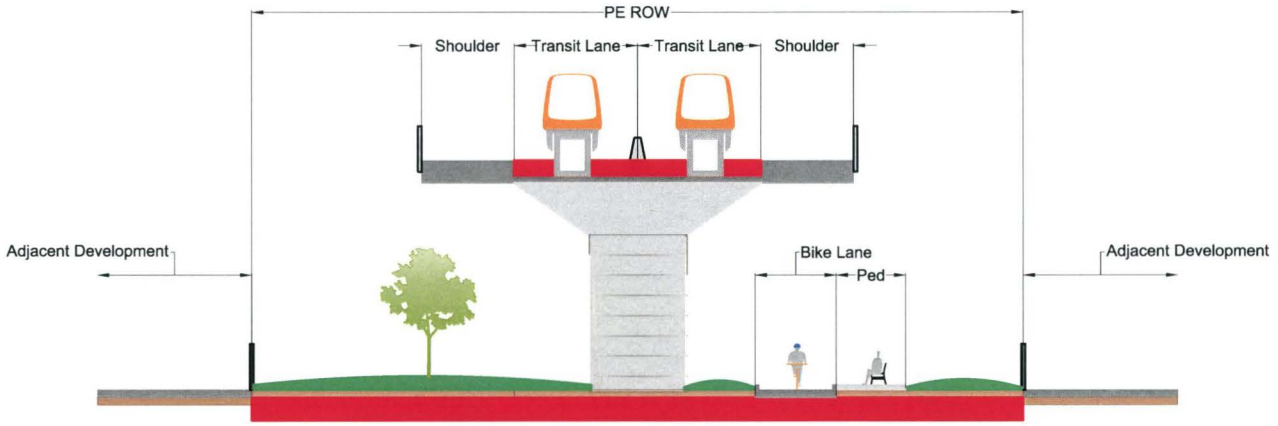
EXISTING YEAR 2008 CONDITION

Legend

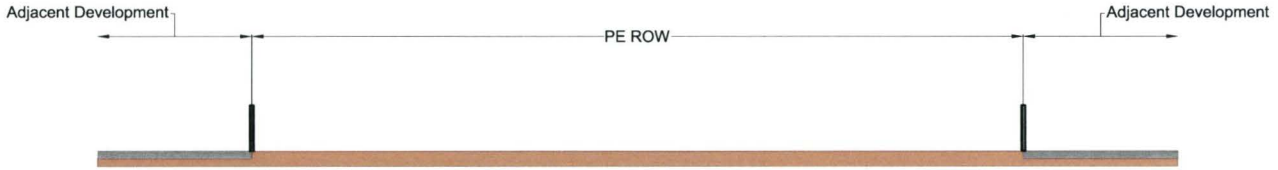
- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

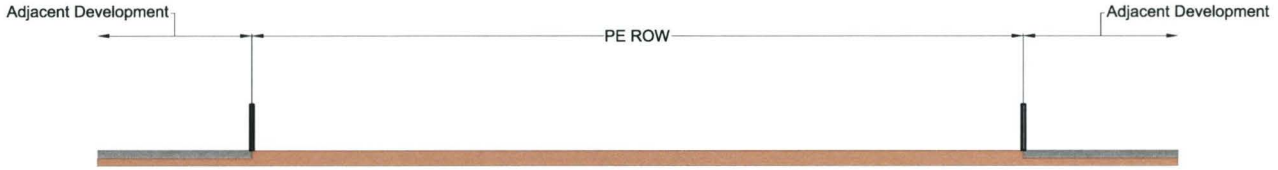
There are no scheduled Baseline improvements along this route.
The Proposed condition includes LRT service operating at-grade in exclusive lanes between the SARTC and the PE ROW along Civic Center Drive and Santa Ana Boulevard. The LRT would then travel within the PE ROW on an elevated dual-track to Valley View Street. BRT service would operate in mixed flow lanes on Valley View Street from the PE ROW to Orangethorpe Avenue, then on Orangethorpe Avenue from Valley View Street to I-605. The BRT service would then travel on I-605 to the Norwalk Metro Green Line Station.



PROPOSED YEAR 2030 CONDITION



BASELINE YEAR 2030 CONDITION



EXISTING YEAR 2008 CONDITION

Legend

- Proposed Year 2030 improvements in addition to any Baseline improvements
- Baseline Year 2030 transportation projects that have a committed funding source
- Existing Year 2008 condition

Notes:

There are no scheduled Baseline improvements along this route.
The Proposed condition includes a technology neutral high-speed transit service that would operate between the SARTC and the Union Station in Downtown Los Angeles on an elevated alignment along I-5, SR-22, the PE ROW, and the UP San Pedro Rail Subdivision and Los Angeles rail lines.